

APPLIED CHARACTER
ANALYSIS

JOHN T. MILLER

APPLIED CHARACTER ANALYSIS

IN HUMAN CONSERVATION

BY

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THE HUMAN CULTURE SCHOOL
BOOKS ON HUMAN CONSERVATION
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DEDICATED TO ALL
WHO USE THE TRUE SCIENCE OF MIND
IN HUMAN IMPROVEMENT, PHYSICALLY,
SOCIALY, INTELLECTUALLY, MORALLY
AND SPIRITUALLY



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PREFACE

During the past century millions of non-professional readers have increased their personal efficiency and have been given a better understanding of human nature through the study of choice books on phrenology. Most of those books that are still in print are written in an old terminology that does not meet the needs of the present. A number of books on human nature that have been written in recent years retain the old terminology. Our purpose in adding another book on character analysis, based upon the discoveries of Doctors Gall and Spurzheim, is to disseminate, in simplified form, the principles of the true science of mind in a terminology that is as near as possible to that used in the psychologies of the schools.

Phrenology, like some other sciences, has been misunderstood, and has often been injured by people within the ranks who have tried to apply its principles without knowing much about them. Dr. Henry George Atkinson, F.G.S., of England, saw this danger when he said of popular phrenologists: "All were professors and few were students." The progress of phrenology has also been retarded by teachers of psychology who condemned it without knowing much about its principles.

At the present time physiologists, criminologists and educators are giving more attention to Gall and phrenology than ever before. In presenting the discoveries here, and giving the methods used and their results in the language of Gall and Spurzheim and their scientific followers we are furnishing to unprejudiced minds an opportunity to investigate the beginning of inductive psychology and are at the same time simplifying the principles so that they can be understood by everybody.

The author has devoted a lifetime to the investigation and application of these principles, and is convinced that the best service he can render humanity is to devote the rest of his life to disseminating them and introducing them into the schools and colleges, where they will become part of the educational equipment of every student.

A correct solution of individual and social problems depends

upon a fundamental system of psychology, and the basis for such a system is found in the discoveries of Drs. Gall and Spurzheim. Many of the most eminent scientists of the world who have investigated these principles have testified to their superiority in the study of human nature, and have spoken of the system of Gall as being the only science of mind established on an inductive basis.

Progressive educators now recognize that practical psychology, including vocational guidance, physiology, ethics, civics, economics, and sociology, should form a part of the educational equipment of every youth, as these are all intimately related to self-development and to right social relationships. The schools are gradually adjusting themselves to meet the needs of the twentieth century, and when the adjustment is fully made the discoveries of Gall will play such an important part in the education of the youth that they will receive the recognition to which they have been entitled for a century.

It is the hope of the author that this book will contribute in a small way toward the realization of that ideal.

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INTRODUCTION

In developing a system of analyzing character by the observational method materials can be gleaned from all ages back to the beginning of human history. Until a century ago the methods used by the most enlightened nations were very much like the natural methods used in childhood. The writings of the Hebrews and the Greeks, as well as of some other ancient peoples, indicate that attention was given to the study of physiognomy. This study was gradually improved during the middle ages, and reached its highest development in the works of Lavater. The four volumes that he wrote contained numerous illustrations of unusual heads and faces, and have had more readers than any other work that was written on physiognomy up to his time (1741-1801). Since the time of Lavater the art of reading character by means of physiognomy has been greatly perfected by Spurzheim, Camper, Blumenbach, Sir Charles Bell, Bichat, Broussais, Alexander Walker, De La Sarthe, Redfield, Wells, Stanton, Willis, Simms, Oppenheim, Coates, Darwin, Mantegazza, Cooke, and others.

A new impetus was given to the study of physiognomy through the discoveries of the functions of the brain and nerves by Drs. Gall and Spurzheim, and Sir Charles Bell, at the beginning of the nineteenth century. The discoveries of Bell were largely upon the spinal cord and the motor and sensory nerves. Gall and Spurzheim discovered the relationship that exists between brain and mind, and extended the study of physiognomy to the proportionate developments of the head, as they had been limited before that time to facial developments. These important discoveries were immediately accepted by the most progressive scientists of the time and recorded in the standard text-books on physiology, such as "Elements of Physiology," by A. Richerand, Professor of the Faculty of Medicine of Paris, Surgeon-in-Chief of the Hospital of St. Louis, Member of the Academies of Vienna, Petersburg, Madrid and Turin; translated from the French by G. J. M. De Lys, M.D., Member of the Royal College of

Surgeons in London; with Notes by N. Chapman, M.D., Professor of Materia Medica in the University of Pennsylvania. This book was published in Philadelphia in 1818, and with approval devotes full pages to the discoveries of Gall and Spurzheim.

In 1828 a "Treatise on Physiology" was written by F. J. V. Broussais, Member of the Royal Academy of Medicine and one of the most celebrated physicians of France. It was translated from the French by John Bell, M.D., and R. La Roche, M.D., two of the most prominent American physicians of that time. The discoveries of Gall and Spurzheim, known as phrenology, were given a conspicuous place in the chapter on "Brain and Nerves." Dr. Broussais later devoted a large volume to the principles of phrenology and in writing about amativeness and its connection with the cerebellum he said:

I assure you that it has not been from rashness, nor without reflection and numerous observations, that I have ventured to take up the defence of phrenology. I have multiplied observations as far as it has been possible for me to do so, before entering the list of its defenders.

In 1848 W. Beach, M.D., wrote a "Treatise on Anatomy, Physiology and Health, designed for Students, Schools and Popular Use," in which he speaks of the modern science of phrenology, and quotes full pages from Professor O. S. Fowler's works. He has a chapter on the mind, another on the temperaments, and an appendix on phrenology, in which he gives an outline of the science and then gives a letter from Alexander Campbell, founder of the Christian Church, in which he speaks very highly of phrenology.

In 1866 the Third Edition of Dr. Dalton's "Treatise on Human Physiology" was published in Philadelphia, and considerable space in it was devoted to Dr. Gall and his phrenological doctrines. Soon after this time Ferrier and other students of physiological psychology gave to the world their experiments on the brains of monkeys, so that in the Sixth Edition of Dalton's "Physiology" all mention of Gall's work is omitted and the space is given to the experiments of the physiological psychologists.

During the last quarter of the nineteenth century the textbooks on physiology were so devoted to the discoveries that were made upon the brains of monkeys that very little was said of the more fundamental discoveries of Gall and Spurzheim, although they were always recognized and appreciated for their skill as anatomists. However, during the present

century much more credit is being given Gall and phrenology by the best physiologists than formerly. One of the most authoritative books on physiology is a "Text-Book of Human Physiology," by Dr. Robert Tigerstedt, Professor of Physiology in the University of Helsingfors, Finland, published by D. Appleton & Company in 1906. The Third Edition was translated into English by John R. Murlin, A.M., Ph.D., of the University and Bellevue Hospital Medical College, and contains an introduction by Professor Graham Lusk, Ph.D., Fellow of the Royal Society of Edinburgh, from which we quote the following:

The treatment of the subject of the central nervous system, and the generalizations regarding its functions, is a masterpiece of its kind.

In the chapter on the "Physiology of the Cerebrum" Dr. Tigerstedt devotes considerable space to Gall and phrenology. On page 629 he says:

Gall was the first to get a deeper insight into the significance of the brain as the substratum of the psychical life of man, and he undertook to prove this doctrine by actual observation. Gall and his pupils had the idea that only the cerebral hemispheres represent the substratum of the mind, and from what we have learned in the preceding chapter and as we shall prove more fully in this one, we can now make this affirmation with much greater definiteness. Gall, however, was not satisfied merely to have demonstrated the importance of the brain, or the psychical life, but proceeds to work out a detailed psychology, which he endeavored to bring into line with his ideas concerning the functions of the brain. Gall's psychology divided the intelligence into a number of different faculties, entirely independent of each other, each of which had its own power of perception and memory. Gall was unquestionably a good observer, and in many points the fundamental principles of his methods were not far wrong.

"The Researches of Flourens on the Functions of the Brain," published in 1822, did more to retard the general acceptance of Gall's discoveries than any other one thing. At that time the discoveries of Flourens on the physiology of the nervous system were considered as a finality with regard to the relation of brain and mind, but confirmation of the localization made by Gall of the speech center, which is now generally accepted, gave the death blow to the theories held by Flourens and he is now entirely discredited by physiologists. The experiments of the past half century on the nervous system have demonstrated the merits of Gall's discoveries, although he has not always been given the credit to which he is entitled. Flechsig, one of the highest authorities of recent

years in physiology, distinguishes thirty-six distinct areas of the brain and on pages 666 and 667 of Tigerstedt's "Physiology" there are illustrations showing the localization of these thirty-six centers, with the statement that they are numbered according to the order in which they receive their myeline substance, and are divided chronologically into three groups. This indicates very clearly that the localizations of phrenologists and those of the most recent physiologists are quite similar and that in the near future they should come to a complete agreement.

Our twentieth century problems are largely psychological and sociological and their correct solution depends very largely upon an intelligent application of the true science of mind. The most practical and helpful system of psychology that has been developed thus far is the one based upon the discoveries of Drs. Gall and Spurzheim. Their principles were thoroughly tested in America by Horace Mann and the intelligent educators who were associated with him. In Great Britain, George Combe and his associates applied phrenological principles to education, thus beginning much of the fundamental work that was later carried out by Herbert Spencer and his associates, who received credit for much work that was done by George Combe, to whom credit was given by William Jolly, Queen Victoria's Inspector of Schools, for doing more than any other man in Great Britain for the development of a national education and for the prevalence of broader views regarding the function of Government in the education of the people. Dr. Graves, in his book on the "History of Modern Education," gives Combe credit for establishing education upon a scientific basis before the time of Huxley and Spencer.

In recent books on criminology Dr. Gall is mentioned as the father of that science and he was very much more fundamental than Lombroso, who is often considered the father of criminology. The best authors of books on criminology in the present century are giving Dr. Gall much more credit for his discoveries than the authors of half a century ago. In constructive social welfare work, as well as in making life more tolerable for the insane, the criminal, the deaf and blind, the pauper, and other unfortunates, the discoveries of Gall have played a very important part during the past century and some of the most intelligent workers have based their efforts entirely upon the system of philosophy that resulted

from those discoveries. Dr. Paul Dubois, Professor of Neuro-pathology in the University of Berne, who has a world-wide reputation through his book, "The Psychic Treatment of Nervous Disorders," has recently written a book entitled, "The Psychological Origin of Mental Disorders," in which he mentions, on page 34, "The Physiology of the Nervous System," by Dr. Georget, which was written nearly a century ago and based upon the phrenological principles. Other authors of that time are mentioned, and then Dr. Dubois says: "To read the works of these authors would do more for the education of the young medical generation than many of our indigestible treatises."

It is generally recognized that less progress has been made in psychiatry, or the study and treatment of mental diseases, than in any other phase of the healing art. This lack of progress is due to the unscientific methods that have prevailed during the past century in the study of the relation that exists between brain and mind. After a century of experimentation and vivisection the tendency of the best students in this field is back to the fundamental work that was inaugurated by Gall. In his book, "The Wonderful Century; Its Successes and Its Failures," Dr. Alfred Russel Wallace, Fellow of the Royal Society, and the most eminent naturalist of his time, begins the part of his book devoted to the failures of the nineteenth century with a chapter entitled, "The Neglect of Phrenology," in which he says:

We have also neglected or rejected some important lines of investigation affecting our own intellectual and spiritual nature; and have in consequence made serious mistakes in our modes of education, in our treatment of mental and physical disease and in our dealings with criminals. A sketch of these various failures will now be given and will, I believe, constitute not the least important portion of my work. I begin with the subject of phrenology, a science of whose substantial truth and vast importance I have no more doubt than I have of the value and importance of any of the great intellectual advances already recorded.

Dr. Wallace devotes thirty-four pages to the fundamental principles of phrenology, giving his unqualified endorsement to the principles and then concludes the chapter with the following statement:

In the twentieth century phrenology will assuredly attain general acceptance. It will prove itself to be the true science of mind. Its practical uses in education, in self-discipline, in the reformatory treat-

ment of criminals, and in the remedial treatment of the insane, will give it one of the highest places in the hierarchy of the sciences; and its persistent neglect and obloquy during the last sixty years referred to as an example of the almost incredible narrowness of prejudice which prevailed among men of science at the very time when they were making such splendid advances in other fields of thought and discovery.

W. Mattieu Williams, F.C.S., F.R.A.S., scientist, educator and author, devoted more than fifty years to the study of Gall's phrenology, and his last book, "A Vindication of Phrenology," was published in 1894. On page 2 of that book he says:

So widely diffused is this idea that phrenology is the art of divining character by head-reading or "bump-feeling," that many of my readers may have already assumed from my contemptuous treatment of such delusion that I am about to vindicate some modern substitute for the teachings of Gall, Spurzheim, Vimont, Broussais, Combe, etc., some "New Phrenology"—some system of cerebral physiology and psychological philosophy based on the muscular convulsions of galvanized monkeys.

I beg to state that my phrenology is the old phrenology of Gall and his scientific followers, the study of which I commenced more than half a century ago and have continued ever since with ever-increasing conviction of the solid truth of the great natural laws it has revealed, and of its pre-eminence as the highest and most important of all the sciences, being the only philosophy of mind that rests upon a strictly inductive basis.

I believe that its general acceptance, its further development and practical application will contribute as much to the moral and social progress of man as the inductive study of the physical sciences has contributed to his physical power and progress; and therefore the best service I can possibly render to my fellow-creatures is to devote the rest of my life to the work of justly reinstating it, of lifting it from the mire into which a combination of bigotry and ignorance, pedantry and quackery, have plunged it—of cleansing it from the foulness due to long contact with these pestiferous agencies, and presenting it pure and undefiled to the contemplation of genuine students of science, in order that they may take up the work of its further evolution.

The scientist who has done most during the past twenty-five years to bring the discoveries of Dr. Gall into prominence is Dr. Bernard Hollander, who has written a number of valuable books, based upon the discoveries of Gall, including his valuable work, "The Revival of Phrenology: The Mental Functions of the Brain; an Investigation into their Localization and their Manifestation in Health and Disease," by Bernard Hollander, M.D., M.R.C.S., L.R.C.P., published in

1901 by Grant Richards of London, and by G. P. Putnam's Sons of New York City. In the preface Dr. Hollander says:

§ 100 of the views of recognized authorities of the present day, as given in this book, tends to show that, whereas other branches of medical science have made great advances during the nineteenth century, our knowledge of the mental functions of the brain is still obscure, and deviations from the normal mind remain little understood and far off from cure. Much value has been attached to the experiments on the brains of animals, but all they can demonstrate amounts to a differentiation of sensory and motor areas; they must ever fail to shed light on the diversity of human talents and dispositions and the variety of mental derangements.

The present work aims at clearing up the mystery of the fundamental psychical functions and their localization in the brain. It is the first work on the subject since the dawn of modern scientific research. While most previous investigators have confined their attention to the intellect alone, the author considers also the emotions and passions of man, normal and abnormal, and demonstrates their connection with the brain.

Even the most recent text-books deem insanity to be a disease of the brain implicating the whole of that organ. Whether a person be melancholic, violently maniacal, homicidal, or suffer from delusions of persecution, whether he be a kleptomaniac, a religious maniac, or fancy himself a millionaire—in every case it is assumed that the whole cortex is affected, whereas the evidence adduced by the author shows that the fundamental varieties of mental derangement are localized in definite circumscribed regions, and frequently are, in the early stages at least, amenable to treatment. Brain surgery should, if future investigators confirm the author's observations, receive an immense stimulus to activity; and the data amassed by the author, and published in this work, are so considerable as to open up quite a new field for research.

The author has based his localizations chiefly on clinical and pathological investigations. Over eight hundred cases are adduced, not merely of the recognized varieties of mental derangement, but of all kinds of deviation from the normal mind, even as regards the manifestation of hunger and thirst. The book contains numerous cases of interest to lawyers, as well as physicians, and should prove of value to all students of human character.

The author found that his localizations confirm those made a century ago by Gall, whose marvelous discoveries of the anatomy and physiology of the brain—on which Spurzheim built his system of phrenology—were ignored by even his most scientific followers, so that the world is ignorant of them, and they are presented for the first time in this book. The history of Gall and his doctrine is given in these pages, and will be quite a revelation to the reader. No subject has ever been so thoroughly misrepresented, even by learned men of acknowledged authority, and no author has ever been so libelled and with such malice as Gall, and this notwithstanding the fact that there is not one man of scientific repute who has written anything which would indicate that he has examined Gall's chief work: "Anatomy and Physiology of the Nervous System in General, and of the Brain in Particular" (4 volumes in folio, and an atlas of 100 plates; Paris, 1810-1819; price 1,000 francs or \$200 per copy). The fact that they have not read Gall's great work should

make those who have any bias on this subject pause and reflect—at least until they have read this book carefully and examined the evidence therein set forth.

Considering the important bearing which the facts contained in this work may possibly have upon the entire development of mental science, on the study and treatment of lunacy, on the education of the young, the precocious alike and the feeble-minded, on moral reform, the diminution of crime, and many other problems affecting the well-being of the community, the author trusts that the evidence and statements, which he produces after fifteen years of investigation, may be received willingly and in fair spirit, however critical.

The author of the present volume has devoted more than a quarter of a century to the study of physiology and psychology, and has taken a thorough course in anatomy and physiology at a regular medical college. For a number of years he was teacher of physiology and psychology in classes of high school and college grades. While pursuing that work he investigated the phrenological discoveries of Gall, Spurzheim and their scientific followers, and has reached the same conclusions as expressed in the above quotations. He therefore feels that the greatest service he can render to humanity is to help to popularize these principles of the true science of mind, in order that they may be applied in the education of the home and the school, and in all institutions that are devoted to constructive social welfare work.

APPLIED CHARACTER ANALYSIS

CHAPTER I

BASIC PRINCIPLES

Character analysis is the scientific reading of the impressions mind makes upon the body, face and brain. All the powers of mind are good when expressed in moderation. Vice, crime and other abnormal conditions, are the result of misdirected mental power. Few individuals begin life with all of the powers harmoniously developed, but fortunately the tendencies that are too strong may be restrained, and those that are deficient may be cultivated, thus changing discords into harmonies. All powers of mind exist in the infant at birth. It is impossible to create any new powers through education, but all tendencies may be modified.

In rational education the tendencies of the child are unfolded in a normal way, and where it is necessary to modify the inherited tendencies the changes are made through the intellectual and moral powers rather than by appeals to appetite, passion, and other selfish sentiments. When tendencies are repressed rather than properly directed a condition is established that handicaps the individual throughout life.

The causes of human action are found in the mind, which functions through the brain, but the expressions are seen in the countenance, as is clearly shown in the following lines:

The human face I love to view,
And trace the passions of the soul.
On it the feelings write anew
Each changing thought as on a scroll.

There the mind its evil doing tells,
And there its noblest deeds will speak;
Just as the ringing of the bells
Proclaims the knell or wedding feast.

How beautiful Love's features are,
Enthroned on Virtue's honest face;
Like some jewel bright and fair,
Worn by the fairest of the race.

But vice and hatred, how they mar
The form and face of man;
And from the choicest pleasures bar
All who fail to do the good they can.

The universal application of the principles of human nature is sufficient reason why everybody should become familiar with these principles for use in self-development and in associations with other people. The principles of human nature can be so simplified that children six years of age will listen to a talk about them with the greatest interest and the closest attention. The writer has tested this study in the schools of more than six hundred communities, and the universal interest shown is evidence that if teachers were properly prepared they might render the most valuable service to their pupils by teaching the principles of human nature and character building in connection with the nature studies usually taught in schools. The result of such education would be that by the time boys and girls completed the eighth grade they would be so familiar with their talents, tendencies, capabilities and limitations, that they could act intelligently in choosing the vocation to which they are best adapted, and in which they could best serve humanity. These same principles would be a valuable asset throughout life to each individual in self-development and in promoting harmonious relations with other people.

The first step in character analysis is to observe the general characteristics of a person. Notice the relative development of the motor, sensory and nutritive organs, the characteristics of which are given in detail in Chapter IV.

Size is the measure of power in all things in nature, when other conditions are equal. The modifying conditions in persons are: Quality; Health; Activity; Proportionate Development; Education.

Some persons are as fine as silk, and possess the quality that gives great power. Others are as coarse as canvas, and lack the quality that insures efficiency.

Some persons have athletic constitutions, and such a surplus supply of vitality that they can do unusual things without exhausting the supply. Others begin life with so little vitality

that they are compelled to conserve it in the most careful manner in order to keep a supply sufficient to do a day's work.

Some are so inactive that they do not possess enough force to accomplish much in life, while others are so extremely active that they have the greatest difficulty in keeping the tension off their nerves.

A study of the proportionate developments shows the numerous connections between these and the efficiency of the individual.

Some persons with mediocre talent have developed their powers to an unusual degree. Others with excellent talent have neglected education either through the lack of ambition or of opportunity, so that they have developed only a small fraction of their innate powers.

After this preliminary study it is important to learn the meaning of the different developments and expressions of the countenance, as their value is universally recognized as an index to character.

After studying the general build of the body and expressions of the face the student should go to headquarters and observe the relative developments of the different regions of the brain. Dr. Frank Parsons, the pioneer vocational adviser, stated in his book, "Choosing a Vocation," page 21:

While I am questioning the applicant about his probable health, education, reading, experience, etc., I carefully observe the shape of the head, the relative development above, before, and behind the ears.

Dr. Henry Maudsley, the eminent scientist, gives a description of the well-formed head and of the badly-formed head. Of the symmetrical head he says:

From the forehead the passage backward should be through a lofty vault, a genuine dome, with no disturbing depressions or vile irregularities to mar its beauty: there should be no marked projections on the human skull formed after the noblest type, but rather a general evenness of contour.

In describing the head where the feelings would be more likely to rule over the intellectual and moral powers Dr. Maudsley said:

The bad features of a badly-formed head would include a narrowness and lowness of the forehead, a flatness of the upper part of the head, a bulging of the sides towards the base, and a great development

of the lower and posterior part; with those grievous characters might be associated a wideness of the zygomatic arch, as in the carnivorous animal, and massive jaw. A man so formed might be expected with some confidence to be given over hopelessly to his brutal instincts.

These statements of Dr. Maudsley show very clearly that character is not read from bumps on the head, as some people imagine, but that the proportionate developments of the different regions of the head do have some relationship to the character of the individual.

Dr. Charles Sedgwick Minot, the anatomist, is given credit for the following statement:

After a considerable period of life the face reflects the qualities constantly in control of the individual. Thus there is some foundation for the popular belief that a person's character shows in the face. The prominence of the features and the shape of the skull indicate the standard of intelligence and character. The forehead of the African savage is receding, and the features are very prominent. The skulls of many criminals indicate the same over-development of features and a low forehead. The skull of an eminent man shows him to have possessed a high forehead and less conspicuous features.

CHAPTER II

PHYSIOGNOMY

Physiognomy is the art of reading character from the face. From childhood to old age persons take the character measurements of others by observing the expressions of the face. Charles Dickens has said: "We are all natural physiognomists. Our fault lies in not heeding our instincts, or first impressions sufficiently—by allowing people to come too near to us and by their false actions explain away their real characters."

History informs us that there were professional physiognomists as early as the time of Socrates, the Greek philosopher. Dr. J. Simms in his book states:

Physiognomy, like all other sciences, has been developed slowly. Aristotle attempted in the fourth century before Christ to place it on a systematic footing before the ancient world. Galen, Cicero, Seneca, Pliny, and Quintilian all wrote upon this theme, but the advance of the science is chiefly due to the moderns—especially to J. Baptista Porta who in the early part of the seventeenth century pursued some valuable investigations which were based upon a comparative view of the faces of men and of the lower animals, and to the great and good Lavater. The "Physiognomical Fragments" which were published by the latter made him extensively known, yet they are so deficient in method, and often so much at fault in the application of rules which their author founded upon his own experience, that they are now regarded as possessing but little scientific value.

The term "Physiognomy," which is derived from two Greek words that signify "to know nature," points us, by its etymology, to the proper method to be pursued in its study. He only who is a wide and close observer of the faces, forms, and characters of men, and of the lower animals, or who is familiar with the conclusions attained by reliable investigators who have studied nature in this field, can hope to become an expert in Physiognomy.

Although Physiognomy has not heretofore been satisfactorily developed as a complete science, it is, in many of its elements, constantly, and successfully applied in the details of practical life, and interwoven into the axioms of society and literature. The early poets always assumed the closest connection between the character and the personal appearance of the heroes they described. It is related that Zopyrus,

an Athenian physiognomist, after examining the features of Socrates, declared that he was by nature addicted to gluttony and drunkenness—an impeachment which was admitted by the great moral teacher, who confessed that it had taxed his powers of self-command to the utmost to restrain his native tendency to these animal excesses.

There is a general agreement among students of human nature regarding the most pronounced characteristics of the human face, but in the minutæ of physiognomy there is a great field for speculation about developments that are difficult to put upon a scientific basis.

The receding forehead shows a practical intellect, but when it recedes too much there may be lack of ability to perform the most intricate intellectual processes. The perpendicular foreheads and those that project forward in the upper region show a tendency to theorize and, where the development is extreme, to work out impractical schemes. The receding forehead is an indication of tendencies toward inductive philosophy; the perpendicular, to deductive.

The eye has always been spoken of as the mirror of the soul. It can be more easily modified by the thoughts and feelings than any other feature except the mouth. These two features indicate more readily than the rest the actions and habits of the individual. When the speech center is strong the convolution of the brain through which it functions presses upon the super-orbital plate and gives greater prominence to the eye than is noticeable where the speech center is deficient. This was the first discovery that Dr. Gall made in his system of brain localizations and physiognomical expressions. When the eyelids are widely separated they indicate a frank, open disposition; when they are pressed so closely together that the individual can scarcely peek out between them they indicate reserve, secretiveness, tact, diplomacy, and, when extreme, they show policy, evasion, hypocrisy, slyness, trickery, cunning, double-dealing and lying.

The color of the eye does not indicate the character of the individual as much as some people imagine. Some persons who are opposite in color of the eye are similar in action, and others who have the same color of eye are very different in action. Character is revealed more through the position of the eyelids than through the color of the eye. The amative eye reveals the life of the debauchee more clearly than any other feature.

I look upon the fair blue skies
 And naught but empty air I see;
 But when I turn me to thine eyes
 It seemeth unto me
 Ten thousand angels spread their wings
 Within those little azure rings.
 The bright black eye,
 The melting blue,
 I cannot choose between the two;
 BUT THAT IS DEAREST ALL THE WHILE
 WHICH WEARS FOR US THE SWEETEST SMILE.

—Holmes.

The most general classification of noses is into Roman; Greek; Jewish; Snub; and Celestial. The Roman nose shows aggressiveness, energy, force and decision. The Greek nose shows refinement, artistic taste, and a great love for the beautiful in art and nature. The Jewish nose indicates shrewdness and is not only found among the Israelites but among the Syrian races everywhere. The Snub nose does not show much aggressiveness and is not usually found among people who show decided individuality. The Celestial nose is the exact opposite of the Jewish nose and is always spoken of in connection with inquisitiveness. It serves as a perpetual interrogation. The Snub and Celestial noses are common among children and are beautiful because they are in harmony with the undeveloped tendencies of child life.

Dr. Oliver Wendell Holmes, who for forty years taught anatomy in Harvard University, makes the following statement regarding the mouth as an index to character:

All parts of the face, doubtless, have their fixed relations to each other and to the character of the person to whom the face belongs. But there is one feature, and especially one part of that feature, which more than any other facial sign reveals the nature of the individual. That feature is the MOUTH, and the portion referred to is the corner. A circle of half an inch radius, having its center at the junction of the two lips, will include the chief focus of expression.

When the lips are firmly pressed together so that the red of the lip is not visible it is an indication that the feelings are not strong and active, or else that they are kept under very good control through the intellectual and moral powers. When the red of the lip is very pronounced the indication is that the impulses are strong and active. Excessive development is often found when the feelings are uncontrolled. One writer has said: "Our other features are made for us,

but we make our mouths." It is true that all the features can be modified, but none of the rest, excepting, perhaps, the eye, can be modified as much as the mouth. When the upper lip is curved outward between the mouth and the nose it indicates firmness and, in extreme cases, stubbornness. The approbative smile draws the lips upward at the corner of the mouth. Mirth gives an upward tendency to all the muscles of the face and turns the corners of the mouth upward. Sadness, gloom and pessimism turn the corners of the mouth downwards, so that it is a scientific fact that the individual is "down at the mouth" when controlled by those mental states. The health of the constitution is indicated by redness of the lips.

Chins are usually classified into pointed, indented, narrow, broad square and broad round. The protruding chin is associated with aggressiveness and force. The retreating chin is more often found where there is a lack of vitality and a retiring disposition. A person who has a high crown, curved upper lip, prominent chin, and square jaw, has the unmistakable signs of a positive, determined character.

The color and form of the cheeks should be given consideration in the study of character. The high cheek bone is said to be indicative of strong lungs. The rosy cheek of childhood is a sure sign of health, and it is unfortunate that environments are not furnished every child that will continue the rosy color of the cheek much later in life than it is usually found. The very common habit of trying to imitate this glow of health by artificial means is an evidence that it is highly prized. If more attention were given to the laws of health culture it would be possible to continue this color of health by personal habits, and accompanying it would be the vim, vigor, vitality and force that would add greatly to the comfort and efficiency of the individual.

The ear is considered of sufficient importance as an index to character study by at least one student of human nature to cause him to produce quite a large volume on its study, but some of his ideas may not have a scientific basis. It is generally conceded that when the auricle, or external ear, is thin and round in the upper region, that the person has more appreciation for the finer tones of music than when the ear comes to a point at the top; hence in speaking of a musical ear this conformation should be kept in mind. The position

of the ear is decided more by the development of the brain surrounding the ear than by its structure.

Those who are desirous of making a more detailed study of physiognomy are referred to the "Encyclopedia of Face and Form Reading," by M. O. Stanton; and to "New Physiognomy," by S. R. Wells. These books give a more detailed treatment of the subject than any others that are now before the public.

CHAPTER III

THE TEMPERAMENTS

The ancients distinguished four temperaments: sanguine, phlegmatic, lymphatic and melancholic. These were based on the predominance of the four supposed humors of the body: blood, lymph, yellow bile and black bile. They were supposed to be in some mysterious way connected with the four elements: fire, air, water and earth. This classification has come down to modern times with slight changes, and is even now used in some medical works as the nervous, sanguine, bilious and lymphatic, according as the cerebral, circulating, muscular or digestive systems seems to predominate. This classification is not to be recommended for use in character analysis because it is based upon color rather than upon structure and is pathological rather than physiological. Dark complexioned persons are called bilious, and light complexioned are called sanguine. There are dark complexioned persons who claim that they were never bilious when told that they are of the bilious temperament; and there are light complexioned persons who say that they are not sanguine but always look on the dark side of life when they are told that they are of the sanguine temperament. Persons with the head predominating greatly over the rest of the organs often resent the statement when they are told that they are nervous. It is possible to have such an organization and yet have good control of the nervous system. The lymphatic temperament is not one to be cultivated or desired, and is largely pathological.

A better classification of the pronounced human types was introduced in the early part of the nineteenth century by O. S. and L. N. Fowler, and is used almost exclusively in phrenological books. They named the temperaments motive, mental and vital. The facts upon which they based their classification have not changed, but the terminology is in need of being modified. Mental is not a physiological, but a psychological, term; hence it does not represent any of the systems of the body. The term vital, as far as it shows en-

durance and force, applies to people with the motor organs predominating rather than to those who have the nutritive organs in the lead. The word motive is psychological, so that it is much more logical to use the term "motor" when speaking of persons in whom the bones and muscles predominate. In 1838 Sidney Smith of England wrote a book entitled, "Principles of Phrenology," in which he writes about the temperaments and adds to the old classification of the sanguine, bilious, nervous and lymphatic the additional terms of "thoracic" and "abdominal." This classification was presented in a modified form by Dr. J. Simms in his "Physiological Chart," which was written in 1872. In speaking of the form of the human body Dr. Simms says:

I prefer, in the consideration of this subject, to discard the word temperament altogether, as liable to grave misunderstanding, and to designate the different classes of men by their different physical forms. These forms, which are five in number, I shall consider in the following order: the Abdominal Form; the Thoracic Form; the Muscular and Fibrous Form; the Osseous or Bony Form; and the Brain and Nerve Form. In this order I follow nature in the manner in which she unfolds the respective powers of mankind. I ascend from that which develops first to that which is latest in maturing, from the lower part of the face and physique to the superior portions, and the same order is maintained throughout the entire classification of this chart. The number of the classes of the signs of the faculties correspond with the number of forms which the signs and their even combination represent. Every person of course possesses all of these forms but in the vast majority of instances they are unequally developed, in which case the predominating form or forms, by marking the leading characteristics, indicate the class to which the subject belongs.

In the "Encyclopedia of Face and Form Reading," by M. O. Stanton, practically the same classification is used. Prof. J. Millott Severn of Brighton, England, published in his book, "Popular Phrenology," in 1913, the following classification: Osseous; Nutritive; Muscular; Thoracic; and Nerval; according as the bones, nutritive organs, muscular system, thoracic organs, or brain, preponderated. Prof. J. P. Blackford, of England, in his "Phrenology for Students," uses practically the same classification, and in concluding his remarks on the temperaments says:

In concluding my exposition of the temperaments I desire to make it clear that no faculty of the mind—moral, intellectual, animal or emotional—is due to, or based upon, temperament alone. It has been so constantly taught and accepted, even by learned men, that the intellectual and moral nature of man depended upon his temperament, that

it is necessary to correct an error at once so misleading and fatal. Courage, timidity, dissimulation, suspicion, imagination, perseverance, ambition, conception, emotion, etc., have all been credited to the temperaments and even modern writers of repute have fallen into the mistake of making temperament the basis of mental faculties, of the real nature of which they are ignorant. These manifestations are all mental operations, and as such are necessarily matters of brain function, and with the origin of which the temperaments have nothing whatever to do. So little does temperament affect the nature of the faculties that it may be shown that with a preponderance of either or any of the temperaments men may be great and clever, or weak and foolish. The brain, and the brain alone, is the organ of the whole mental faculties, the influence of the temperaments being in modifying the direction, method and intensity of their action.

There is such a prejudice on the part of some students of science against the words "Temperament" and "Type" that it is advisable to use, instead of either of these, the term "Proportionate Developments" when observing which of the organs predominate over the others. In naming the three classes of organs it is best to use the classification that is universally employed by students of biology, physiology and zoology: motor; sensory; and nutritive. This simplifies matters by giving a terminology that will be understood by all students of the science of life. The entire study of character analysis, whether from the build of the body, the expression of the face, or the shape of the head, is based upon proportionate developments, and no reasonable objection can be raised to the use of this term.

CHAPTER IV

PROPORTIONATE DEVELOPMENTS OF BODY

In the human organism there are three classes of organs: the motor; sensory; and nutritive. Every person has all of these, but in varying degree. As the three primary colors, (red, yellow and blue) are blended to form all shades of art and nature, so the blending of these three systems in different proportions constitutes all the shades of human nature. When an individual has one of these systems decidedly strong it is easy to distinguish the characteristics, but when all are nearly equally developed it is more difficult to estimate the proportionate developments.

When the motor organs predominate the characteristics are: prominent brow; receding, narrow forehead; high crown; high cheek bones; angular face; broad, square shoulders; long limbs that taper very little, ending in large extremities. Such persons are built for work requiring strength and endurance rather than speed and fine adjustment. Children with these developments are usually like the winter fruit—slow in maturing—but very substantial when matured. They reach their zenith later than those of the other proportionate developments. They constitute a very large per cent of those who fall low when they are measured by the modern systems of mental testing, but they are among the substantial citizens and often become leaders in science and mechanism. They are not fond of detail, and are never found among the great artists. They should be ruled through the intellect as much as possible, and not be forced into doing things that are objectionable to them. Jerome Allen, in his book on "Temperament and Education" says, in speaking of youths of this type: "Many a motor boy has been sent to the State's prison, if not to the gallows, by ignorant teachers."

When the sensory organs predominate the head is large in proportion to the rest of the body; the forehead is full and high; the face tapers rapidly to the chin; the body is slender; the shoulders usually slope; the limbs are slender and taper

very little; the palm of the hand is narrow; the fingers are long and slender. Such persons are built for work requiring detail and fine adjustments, rather than great strength and endurance. They excel in the fine arts, in fine mechanical construction and in clerical work. They are likely to become so absorbed in intellectual work that they neglect to take the necessary physical exercise and fail to keep their vitality at as high a standard as it should be. The intellectual, esthetic, moral and spiritual tendencies are usually so strong that such persons do not have a difficult time in controlling their appetites and passions. Children with these developments are usually precocious, saying and doing things that would be a credit to persons much older than they are. When these tendencies predominate too much they should be counteracted by physical exercise, outdoor life, wholesome diet, and other health culture principles. Persons who are lacking in the sensory organs can cultivate them by giving more attention to intellectual pursuits. These proportionate developments are given as an inheritance to individuals, but are often changed a number of times in a lifetime, by occupation, diet, exercise, study, and other physical and mental habits.

When the nutritive organs predominate in a person there is a roundness of the head and face; the body is plump; the arms are large at the shoulders and taper rapidly to the wrists; the palm of the hand is wide and tapers rapidly; the fingers also taper rapidly and are small at the point; the emotional nature predominates, giving a desire to get results without waiting too long, so that the plodder is not found in this class. In school the pupils of this type prefer expressional studies and show a fondness for change. They should choose a vocation that provides variety, because they could not adapt themselves easily to the monotony of work where they would be compelled to give their efforts entirely to one thing. They are good entertainers and prefer work that enables them to mingle with other people. They have good recuperative powers so that it does not take them long to rebuild their vitality when it is lowered.

When the motor, sensory and nutritive organs are equally developed they give a symmetry to the constitution that indicates versatility and adaptability rather than a decided choice for one thing only. Those who have decided developments are likely to show genius in one particular line, so that the problem of choosing a vocation is not a difficult one, but when

all the organs are equally developed there is often difficulty in selecting one vocation out of the ten thousand that are now found in the United States. Persons with the balanced organization can succeed in any one of a number of vocations by concentrating their efforts upon it, but as this is an age of specialization it is necessary to center the mind and efforts upon one line in order to become efficient in it. In order to explore new worlds of invention and discovery we need geniuses, those having a special inclination for certain pursuits, but in doing the world's work the best results are obtained when there is a general blending of all the elements of the constitution. Persons who have such a blending should not become discouraged when so many vocations interest them that they find difficulty in selecting one, because after laying a broad foundation as a preparation for life they will be able to make a definite choice and will get more enjoyment out of life than if they had specialized too soon.

CHAPTER V

THE PHYSIOGNOMY OF THE HAND

The shape of the hand harmonizes with the form of the rest of the body, and without considering the lines that the hand contains it is an index to human character, so that the skilled character analyst can tell much about the character of an individual from the shape of the hand when the rest of the organism is invisible.

The three pronounced types of hands are due to the decided development of one of the three systems of organs that constitute the human body: the motor; nutritive; and the sensory, or nervous, system. As these systems have already been described it is unnecessary to give the details of their characteristics here.

If the motor organs predominate in a person the palm of the hand is medium wide and tapers very little, the fingers are thick and square at the point.

If the nutritive organs predominate the palm of the hand is very wide next to the wrist, and tapers rapidly, the fingers tapering rapidly and being small at the point.

When the sensory organs, or nervous system, predominate, the palm of the hand is narrow, the fingers are long and slender, and the joints are often prominent.

When all the organs are equally developed there is a combination of all these pronounced characteristics, giving a symmetrical development to the hand and the whole organization is characterized by symmetry.

In writing on the physiognomy of the hand Samuel R. Wells, one of the best authorities on the subject, says in his book, "New Physiognomy; or Signs of Character," page 301:

The hand cannot be offered as a complete substitute for either the head or the face in the determination of character, but it is a ready aid in the study of those more important parts. A man does not think, reason and invent because he has hands; but his hands are the necessary result of an organization calculated to think, reason and invent. The hand is a most admirable piece of work, and most admirably adjusted

to the other parts of the limb and to the body; but without the sovereign mind, whose subject and servant it is, it would be useless. It is mind that makes man the lord of creation.

Further, we cannot fail to recognize and admire the adaptation of the hand to the mind at all ages, and under various circumstances; in its weakness and suppleness, and in its purposeless and playful movement in infancy and childhood; in its gradually increasing strength and steadiness as the intellect ripens; in the stiffness and shakiness of declining years; in the iron grasp of the artisan; in the light, delicate touch of the lady; in the twirlings, fumbings, and contortions of the idiot; in the stealthy movements of the thief; in the tremulousness of the drunkard; in the open-handedness of the liberal man; and in the close-fistedness of the niggard.

Thus the hand becomes the organ of expression and an index of character. What would not the nervous young gentleman in a morning call give to be quit of these tale-telling members? or what would he do without a hat or a stick to amuse them?

How effective an auxiliary to the orator is a wave of the hand, or even the movement of a finger! Some men, indeed, seem to owe the efficiency of their declamation as much to the hand as the tongue.

In speaking of the long hand, which is peculiar to the person who has the motor organs, or bones, muscles and ligaments predominating, Mr. Wells says:

It is connected with the predominance of the osseous and muscular systems, the motor temperament, the oblong face and the tall body, and indicates the physical and mental traits attributed to these conditions. Julius Cæsar, Cromwell, Lord Brougham, Andrew Jackson and Patrick Henry had hands of this form.

The long hand has a powerful grasp; is adapted to work, and shows a love for it; is distinguished for strength rather than for delicacy; strikes hard blows; is not afraid of getting hurt, and has no very tender scruples about hurting others, if occasion require. If it give you the clasp of friendship or of love, you may depend upon it to make good to the utmost any promise that clasp implies. If it be lifted in menace, beware! It is true in its affections, terrible in its enmity. Whatever its purpose, whether of love or of hate—whether a caress or a blow—it is not easily turned aside. It is generally better fitted to wield the sword than the pen or pencil; but if it write, it will be in a strong, compact, nervous style; and if it can constrain its action within the limits of one of the fine arts, its pictures, statues, or music will have boldness and originality rather than delicacy and beauty of finish. The long hand is the hand of action and of power.

Of the hand that is found on persons in whom the nutritive organs predominate Mr. Wells says:

The short, thick, or plump hand contrasts strongly with the foregoing. It is distinguished for breadth and fullness rather than length. The palm is round and soft, the fingers plump and tapering, the veins,

arteries, and tendons invisible, and the whole thick and heavy. It is found connected with a corresponding configuration of the other parts of the body—with the round face, the stout trunk, and the plump, tapering limbs. It indicates the nutritive temperament and the mental organization associated therewith. Its grasp is soft, warm, and hearty, but it does not always mean so much as the grasp of the long hand. You cannot, in all cases, quite so surely trust in the friendship or the love which it seems to betoken. It is lavish of caresses; affects play rather than hard work; loves its ease too well to be fond of giving deadly blows; and is readily turned aside from its aims, especially where turning aside is easier than persistency in its straightforward course. Macaulay, Irving, Wirt, and Browning furnish examples of this kind of hand.

It is better adapted to hold the pen than the sword, and may write with great fervor and brilliancy, but its style will not often be characterized by either great strength or great originality. The short, thick hand is the hand of vivacity and versatility.

In speaking of the characteristics of the hand of persons in whom the brain is large in proportion to the rest of the body, and in whom the nervous system, or sensory organs, predominate, Mr. Wells says:

This hand accompanies and indicates the predominance of the nervous system and the sensory temperament, and is found conjoined with the conical or pyriform face, the expressive features, and the slight and often graceful form properly attributed to that constitutional condition. Dr. Oliver Wendell Holmes had a hand of this sort, as had Joseph C. Neal, Mrs. Hemans, Mrs. Osgood, and the greater number of poets, artists and literary persons.

This hand is not adapted to heavy labor, but can handle the light tools of the finer mechanic arts with great delicacy of touch and extraordinary skill. In its typical development it is particularly adapted to the pen and pencil. It is the literary, and especially the poetic and the artistic hand; and as it approximates in form to one or the other of the foregoing classes, so will the character of its productions be modified. It has a friendly grasp for a few, and a tender loving clasp for one. It is somewhat exclusive and aristocratic, and, if possible, avoids getting soiled.

The shape of the hand not only indicates the shape of the rest of the body, but shows the proportionate development and activity of the different powers of mind, the thought powers, as well as the feelings. The shape of the hand can be modified by the work that the individual does, but the same modifications will be shown to a degree throughout the entire body if the exercise brings into action the various muscles of the organism. This also affects the circulation of the blood, and may greatly modify the temperature, not only of the hand, but of the rest of the body.

The character of an individual is revealed through the handshake, whether the person is conscious of it or not. Charles Dickens depicted human nature accurately when describing the handshake of Uriah Heep in "David Copperfield." Uriah professed to be very humble, but his character, as revealed by the handshake, did not harmonize with his pretensions. When David took hold of Uriah's hand he said that it was so clammy that it was like shaking a fish's tail, and when the real character of Uriah was revealed it was as clammy as the handshake indicated. There are some interesting suggestions on handshaking on page 313 of Mr. Wells' excellent book on character analysis, "New Physiognomy":

There is a significance in the different modes of shaking hands, which indicates, so far as a single act can do, the character of the person. The reader who has observed may recall the peculiarities of different persons with whom he has shaken hands, and thus note how characteristic was this simple act.

How much do we learn of a man or a woman by the shake of the hand? Who would expect to get a handsome donation—or a donation at all—from one who puts out two fingers to be shaken, and keeps the others bent, as upon an "itching palm?" The hand coldly held out to be shaken, and drawn away again as soon as it decently may be, indicates a cold, if not a selfish and heartless character; while the hand which seeks yours and unwillingly relinquishes its warm, hearty clasp, belongs to a person with a genial disposition and a ready sympathy with his fellow-men.

In a momentary squeeze of the hand how much of the heart often oozes through the fingers! Who, that ever experienced it, has ever forgotten the feeling conveyed by the eloquent pressure of the hand of a dying friend, when the tongue has ceased to speak.

A right hearty grasp of the hand indicates warmth, ardor, executive-ness, and strength of character; while a soft, lax touch, without the grasp, indicates the opposite characteristics. In the grasp of persons with large-hearted, generous minds, there is a kind of "whole soul" expression, most refreshing and acceptable to kindred spirits.

But when Miss Weakness presents you with a few cold, clammy, lifeless fingers for you to shake, you will naturally think of a hospital, an infirmary, or the tomb. There are foolish persons who think it pretty to have soft, wet, cold hands, when the fact is, it is only an evidence that they are sick; or that, inasmuch as the circulation of the blood is partial and feeble, they are not well; and unless they bring about a change, and induce warm hands and warm feet, by the necessary bodily exercises, they are on the road to the grave—cold hands, cold feet, and a hot head are indications of anything but health.

Action is life; inaction is death. Life, in the human body, is warm. Death is cold. Vigorous bodily action causes the blood to circulate throughout every part of the body. The want of action causes it, so to speak, to stand still. The blood goes most freely to those parts of the body or brain most exercised. If we swing the sledge-hammer, like

the blacksmith, or climb the ropes, like the sailor, we get large and strong arms and hands. If we row a boat or swing a scythe, it is the same. But if we use the brain chiefly to the exclusion of the muscles, we may have more active minds but weaker bodies. The better condition in which the entire being—body and brain—is symmetrically developed, requires the harmonious exercise of all the parts, in which case there will be a happy equilibrium, with no excess, no deficiency—no hot headache, no cold feet. Headache is usually caused by a foul stomach, or a pressure of blood on the brain; cold feet by a limited circulation of blood in those extremities.

There is an old adage which says: "Keep the feet warm and the head cool," which was, no doubt, intended to counteract a tendency the other way. Certain it is that those who suffer with hot heads usually have cold feet and hands.

Time was, in the old country, when aristocracy deigned to extend a single finger, or at most, two, to be shaken by humble democracy. Even now we hear of instances in which "my noble lady" repeats the offense when saluted by a more humble individual. This is an indignity which no true man or woman will either offer or receive. Refinement and true gentility give the whole hand, and respond cordially, if at all. This is equivalent to saying, "You are welcome"; or, when parting, "Adieu! God be with you."

There is a habit, among a rude class, growing out of an over-ardent temperament on the part of those who are more strong and vigorous than delicate or refined, who give your hand a crushing grasp, which is often most painful. In these cases there may be great kindness and "strong" affection, but it is as crude as it is hearty.

Another gives you a cold flabby hand, with no energy or warmth in it, and you feel chilled or repelled by the negative influence imparted, and you are expected to shake the inanimate appendage of a spiritless body.

Is the grasp warm, ardent, and vigorous? so is the disposition. Is it cool, formal, and without emotion? so is the character. Is it magnetic, electrical, and animating? the disposition is the same. As we shake hands, so we feel, and so we are. Much of our true character is revealed in shaking hands.

But why do we shake hands at all? It is a very old-fashioned way of indicating friendship. We read in the Book of books that Jehu said to Jehonadab: "Is thy heart right as my heart is with thine heart? If it be, give me thine hand." And it is not merely an old-fashioned custom. It is a natural one as well. It is the contact of sensitive and magnetic surfaces through which there is, in something more than merely a figurative sense, an interchange of feeling. The same principle is illustrated in another of our modes of greeting. When we wish to reciprocate the warmer feelings, we are not content with the contact of the hands—we bring the lips into service. A shake of the hands suffices for friendship, among undemonstrative Anglo-Saxons at least, but a kiss is a token of a more tender affection.

The many uses to which the hand can be put are enumerated by Montaigne, as follows:

With the hand we demand, we promise, we call, dismiss, threaten, entreat, supplicate, deny, refuse, interrogate, admire, reckon, confess, repent; express fear, express shame, express doubt; we instruct, command, unite, encourage, swear, testify, accuse, condemn, acquit, insult, despise, defy, disdain, flatter, applaud, bless, abuse, ridicule, reconcile, recommend, exalt, regale, gladden, complain, afflict, discomfort, discourage, astonish, exclaim, indicate silence, and what not, with a variety and multiplication that keep pace with the tongue.

CHAPTER VI

PHYSICAL MEASUREMENTS

The expert student of human nature usually makes his estimates of the developments of people without the use of tape measure or calipers, but in beginning it is often convenient to make physical measurements in order to get a correct estimate of the tendencies and talents of a person. The following measurements are the average for a person weighing 150 pounds, and having a height of 67 inches:

Circumference of head, taken on line with the eyebrows and above the ears, 22 inches;

From the openings of the ear over the top head, $14\frac{1}{2}$ inches;

From the openings of the ear over the forehead, above the eyes, $11\frac{3}{4}$ inches;

Diameter, above the ears, 6 inches.

Length of head as indicated by caliper measurement, $7\frac{1}{4}$ inches.

The measurements are not usually found in the proportions indicated above, because there are few persons who have a perfect blending of all the organs. Taking the above measurements as a standard for the medium sized man, the estimate is fairly accurate for the medium sized woman when the weight is reduced 25 pounds, the height 3 inches, and the circumference of the head $\frac{1}{2}$ inch. This would give the medium sized woman a weight of 125 pounds, a height of 64 inches, and a head circumference of $21\frac{1}{2}$ inches. The finer quality of the average woman compensates her for what she lacks in size. When the weight of a person is 100 pounds the height should be 61 inches and the circumference of the head 21 inches, to indicate symmetry. Continuing upward from the measurements of the medium sized man, 25 pounds should be added for every 3 inches additional height, and every additional half inch in head circumference; thus if a person weighs 175 pounds the height should be 70 inches and the circumference of the head $22\frac{1}{2}$ inches. If the weight is 200 pounds the height should be 73 inches and the circumference of the head

23 inches. After taking the measurements suggested above, the accuracy of character analysis depends upon the ability of the student to see and classify scientific facts pertaining to the human organism. From childhood to old age persons are observing others and making estimates of character. The accuracy of these estimates depends upon the person's ability to study human nature. The physical measurements can be made with mathematical accuracy, but in estimating the talents and tendencies of a person it is necessary to take into consideration quality, health, activity and education. These, of course, cannot be measured with calipers or tape; hence it is impossible to make of the study of human nature more than an estimative science, such as has been developed for use in studying animals and plants. In stock judging the estimates are sufficiently systematized to enable all who make a study of the fundamental principles to agree fairly well in applying these principles in estimating the characteristics of animals. The same may be said of experts in analyzing human character for the purpose of vocational guidance, making mental adjustments, and otherwise helping the individual.

In stock judging the proportionate developments of the head are taken into consideration, and it is more important in estimating human character to study the proportionate developments of the different regions of the brain, because they are more highly developed than in the lower animals. There is still a great difference of opinion among psychologists of the different schools regarding the functions of the different regions of the brain, but there is a general agreement on the location and function of speech. The most recent books on school psychology place the higher psychical functions in the forehead, and the motor functions in the mid-brain, but do not differentiate in treating powers of mind. Dr. J. R. Buchanan, one of the greatest discoverers in the realm of cerebral psychology, said that all parts of the brain have physiological functions as well as psychological. The physiological functions were discovered by Ferrier, Munk, Exner, Horsley, Schafer, Goltz, Fritsch, Hitzig, and other prominent investigators in that field, but they were unable to discover the psychic functions by the methods they used. On page 181 of "*Anatomy of the Brain and Spinal Cord*," Dr. J. Ryland Whitaker, one of the best authorities on the subject, says: "The true intellectual centers, holding in subjection the lower centers, cannot be stimulated from without." The speech center was not dis-

covered from without, as were the motor centers, but by injuries to that region of the brain which affected the powers of speech. The most fundamental discoveries in the mental functions of the brain were made more than a century ago by the eminent anatomists, Drs. Gall and Spurzheim, previously mentioned in these pages, and have been more recently verified by Dr. Bernard Hollander and other reputable scientists. In his book, "Mental Functions of the Brain," page 4 of the Preface, Dr. Hollander says: "The author found that his localizations confirmed those made a century ago by Gall, on whose marvelous discoveries of the anatomy and physiology of the brain Spurzheim built his system of Phrenology."

In the observational method of character study we interpret the expressions of life by the proportionate developments of body, face and brain; hence it is important to make an accurate estimate of all these indicators of character.

CHAPTER VII

THE ELEMENTS OF MIND

Thus far forty-two (42) fundamental powers of mind have been discovered through observation and experimentation, and two others held as probable. These explain the phenomena of mind classified by psychologists as the Intellect, the Feelings and the Will. For convenience they are subdivided into: the SELF-PROTECTING POWERS, or POWERS OF SELF-PRESERVATION; the INTELLECT, divided into the PERCEPTIVE and REFLECTIVE POWERS; the PERFECTING, or ARTISTIC POWERS; the SOCIAL AND DOMESTIC POWERS; the ASPIRING AND GOVERNING POWERS; the MORAL AND SPIRITUAL POWERS.

The Self-Protecting Powers are: (1) Love of Life; (2) Appetite; (3) Energy; (4) Courage; (5) Reserve; (6) Acquisitiveness; (?) Thrift.

Of the Intellectual Powers the Perceptives are: (7) Observation; (8) Form; (9) Size; (10) Weight; (11) Color; (12) Order; (13) Number; (14) Eventuality; (15) Locality; (16) Time; (17) Tune; (18) Speech.

The Reflective Powers in the Intellectual Group are: (19) Comparison, which judges similarities or resemblances; (20) Causality, which studies cause and effect relations; (21) Mirth.

The Perfecting Powers are: (22) Imitation; (23) Adaptation; (24) Construction; (25) Ideality; (26) Sublimity.

The Social and Domestic Affections are: (27) Parental Love; (28) Love of Home; (29) Friendship; (30) Conjugal Love; (31) Amativeness.

The Aspiring and Governing Powers are: (32) Continuity; (33) Self-Reliance; (34) Firmness; (35) Self-Consciousness; (??) Ambition; (36) Caution.

The Moral and Spiritual Powers are: (37) Conscience; (38) Hope; (39) Faith; (40) Intuition; (41) Benevolence; (42) Reverence.

This classification includes all that is usually considered

under the term Conscious, Subconscious and Superconscious Mind; or the Objective and the Subjective Mind. The Objective Mind is used in the same sense as the Intellect; and the Subjective Mind includes all of the powers named above excepting the Intellect. The Conscious Mind is usually used synonymously with the Intellect; the Superconscious Mind with the Perfecting and Moral and Spiritual Powers; and the Subconscious Mind with the Self-Protecting, Social and Domestic, and the Aspiring and Governing Powers. Some psychologists use the term Unconscious Mind. Dr. Schofield, of England, has written a large book by that title. The only logical use for that term is in connection with the sympathetic nervous system, governing the nutritive processes that are carried on whether we are conscious or unconscious, awake or asleep. There is need for a terminology that will explain mental phenomena in a way to be understood by all who study the laws of mind. There are many misunderstandings among the followers of the numerous schools of psychology because of the great variety of terminologies now in use. If the representatives of the various schools could agree upon one terminology many misunderstandings could be avoided and many of the mysteries of psychology made clear. More has been done through the system of mind study inaugurated by Dr. Gall to develop a terminology in harmony with nature than by any other school. Dr. Thomas A. Hyde, a student of psychology at Harvard University under Prof. Wm. James, said in his graduating thesis, "How to Study Character, or the True Basis for the Science of Mind":

When Gall appeared upon the arena of investigation into the genetic powers of mind, he found everything in the mental field in a deplorable condition. Philosophers of the introspective school were still debating among themselves upon those very faculties necessary to form an accurate judgment of anything. Anatomists and physiologists were still undecided that the brain was the organ of the mind. It is true they had partitioned off the brain into a few compartments and had added barbarous names to them, but these names indicated nothing but ignorance of the function of the parts to which they were affixed. Gall had, therefore, not only to combat the erroneous analysis of the mind, as given by the metaphysicians, but even to revolutionize the science of anatomy. He taught the composition of the brain. He proved the brain to consist of fibers and cells, and separated the white from the gray matter. When we read the account of Dr. Spurzheim's dissection of a brain, in presence of the learned anatomists and professors of medicine in Edinburgh, we find that so ignorant were these professors of the composition of the brain, that some of them shook their wise heads and said they thought they saw fibers. The theory of the brain

composition is now a settled fact, yet Gall had to combat this point against the learned of his day. He taught a more satisfactory method of dissecting the brain, a method which undoubtedly laid the foundation of the present experimental school, at whose head are Ferrier, Goltz, and others, yet some of the disciples of this school, ignorant of what they owe to Gall, are still in the habit of sneering at him and his mental philosophy.

It is not within my province to give an account of the discoveries Gall and Spurzheim made in anatomy and physiology. I mention these only to show that the founders of Phrenology were not unskilled in anatomy, as the opponents of Phrenology have asserted. It was the opponents of Phrenology who were unskilled in anatomy. All the discoveries in anatomy and physiology made by Drs. Gall and Spurzheim, and which were bitterly opposed at the time, are now acknowledged by the leading anatomists and physiologists to be sound and correct. The condition of mental and anatomical science being such as we have described we must acknowledge the fathers of Phrenology to be men of rare genius. The force of mind which enabled them to break away from nearly all the recognized channels of investigating the mind, and seize upon a system of investigation which included all the benefits obtainable by other methods, and added a means of determining the organs and functions of the brain entirely overlooked by all who cultivated the science of mind, is surely worthy of the name of genius. Their superior minds surveyed the whole field of mental inquiry. They saw at once the imperfections which necessarily followed from investigating the mind by self-consciousness alone. They saw the futility of anatomy unaided by physiology to determine the organs and functions of the brain, and formulated a method at once simple, natural, accessible, and within the range of thorough demonstration; a method destined to lead to a science of mind and character founded upon a physical basis. As the truth of Phrenology depends upon this system of investigation, I think it necessary to show in detail, and yet, as concisely as possible, the method of proof and its attendant advantages. Especially do I think this necessary, as Professor Bain, while aided in the composition of his works on the study of character by the analysis of the human mind supplied by Phrenology, and also by the new light thrown upon many obscure physiological facts by deductions obtained from the phrenological methods; yet, after examining Phrenology and acknowledging its merits and the general truth of its inductions, he professes to steer out upon a course of self-conscious reflection, to discover the fundamental powers of mind. I will not discuss Bain's work upon the study of character here, but will leave it till later, and in the meanwhile go on with the method of phrenological investigation.

Ever since the Baconian philosophy laid down the grand principle of first accurately ascertaining facts and then drawing inductions from them, the domain of speculative philosophy has been growing narrower and narrower; science after science has freed it from the trammels of the purely speculative school and established itself upon the solid basis of inductions gleaned from a wide field of observation. For ages the science of geology offered ample scope to the speculative philosopher to engage in endless disputations; but a few men by patient observations of the phenomena of nature put to naught all their vain speculation, and established a science of geology on the basis of induction; so

also the sciences of chemistry and physiology never made any positive progress till men of patient inquiry, undaunted by vague theories, urged with all the vehemence of authority, established them upon the basis of observed facts. They constantly observed the various organs of the body in activity until they learned their functions. If they had merely speculated upon the probable function of the heart or liver, they would be speculating still. Thus every science has progressed in proportion as it has been freed from the shackles of speculation and guided by the light of observation.

Phrenology was an attempt to rescue mental science from the region of speculation and subject it, like other sciences, to experiment and observation. Phrenology claims that it should be investigated according to the principles upon which all sciences having a physical basis are investigated. Bain evidently deals unfairly with Phrenology when he declares that he is unwilling to follow its long, though correct, method in determining what are and what are not fundamental powers, and seeks to settle the truth or falsity of the phrenological analysis by what he calls an appeal to consciousness. No physiologist would submit to have the functions of the various parts of the body discussed in this way. He would insist upon an examination of the observed facts by which the functions of the different bodily organs had been established. What physiologist, for instance, would submit to a long discussion upon the functions of the liver, the kidneys, the heart or the lungs, whether it were possible that these could perform the work respectively assigned to them? Every physiologist would, most assuredly, protest against such a course, and insist emphatically upon an examination of the observed facts of nature; yet this is the way the modern school of mental philosophy persists in determining the merits of Phrenology, which claims to be founded upon the observation of physical and mental phenomena connected with material organs.

The method of discovering the organs and functions of the brain pursued by Gall was similar to that which, pursued by the physiologists, led to the discovery of the different organs of the human body and their functions.

It was a method only such as a genius would ever have thought of applying to the discovery of the functions of the brain. Thousands had daily observed the falling of apples to the ground, but it took a Newton to discover, by the application of this fact, the universal law of gravitation. Steam had always issued from the mouth of a kettle, but Watt saw not only the steam, but the power it contained. The blood had coursed through the arteries and veins of men ever since the creation, but no philosopher of the speculative school ever evolved and demonstrated a theory of its circulation; this was the glorious achievement of Harvey, by dint of patient observation and thoughtful induction. Anatomists, before the time of Gall, had dissected the brain by slicing it as one would a cabbage, and theorized concerning the functions of its various parts, but no system of mental philosophy was devised. Men have differed in disposition and talent ever since the world began, but no philosopher, before the days of Gall, ever clearly traced the connection of these dispositions and talents with special developments of the brain. Much speculation no doubt existed before Gall as to the seat of the passions, intellect, and emotions, but nothing was clearly demonstrated. Many of the erroneous theories then promul-

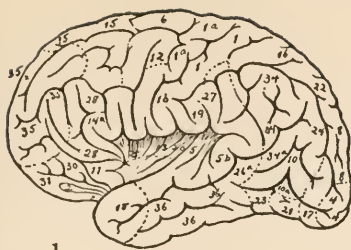
gated still retard the progress of mental philosophy. Gall was the first philosopher who conceived the most accessible system of proof capable of determining and demonstrating the organs of the brain and the dependence of mental manifestation upon these organs. The method of his discovery was unique, but wonderful in its results. Let us see how Gall proceeded. Having gleaned from the field of observation facts to show that men differed widely in dispositions and talents, he next endeavored to ascertain whether these diverse talents and dispositions were connected with any physiognomical development of body or brain. He discovered in his investigations that nature had performed what the experimental school at the present time vainly tries to perform, namely, to obtain negative and positive proofs of the functions of particular portions of the brain. The school of Ferrier, Goltz, and others is wont to take living animals and remove portions of their brains, and ascertain by their actions what faculties seem to be lost. They hope in this way to discover the functions of the various parts of the brain. But Gall discovered that nature had already performed this process, for she had given birth to men and animals, with portions of their brains excessively developed, and the same portions in others exceedingly depressed. Gall, by a series of observations on men of peculiar and special talent or character, succeeded in connecting certain dispositions or tendencies with particular portions of the encephalon. This discovery was of immense importance to Gall, or rather to the science of mind. It was impossible to get a more extensive field to prove any system of philosophy. Nature had spread out in unlimited profusion the means of making and verifying observations. Not only the human race, but all animal life was subject to this method of investigation. Neither did time place a limit to these observations, for men and animals could be observed, not for one day only, but for months and years. The experimental school can boast of no such opportunities; their labors must necessarily be confined to a few animals under the effects of anæsthesia, and reluctant responses from the fundamental powers of mind can only be dragged from them amid scenes of blood, torpor and stupor. These responses, consisting mainly of bodily movement, will be interpreted with difficulty as the signs of the functions of cerebral organs.

Gall having thus discovered that the talents of men were connected with particular portions of the brain, next proceeded to gather a number of skulls showing abnormal developments. He took casts of the heads of such persons as were noted for special talent or traits of character, and also casts of those who were deficient in these same traits of character, and on comparing them found that the former had certain portions of the brain excessively developed and the latter had but a small development of the corresponding portions of brain. When in many cases he found certain talents or traits of character to exist in the person with a particular portion of the brain developed, shown by prominence or fullness on the skull, he found that the same talents were absent or weakly manifested in those whose skulls were deficient in the same place. When the prominence existed in the other cases, he concluded that these traits of character were connected with a portion of the brain contained within the skull. Thus he had proofs both positive and negative.

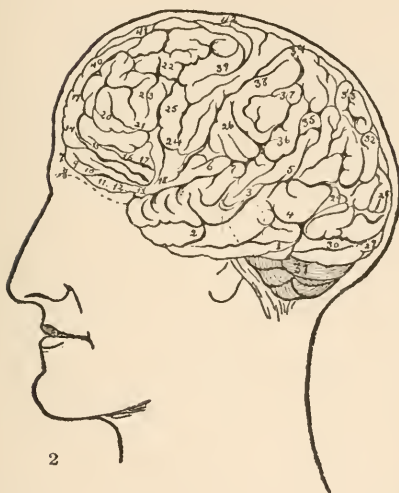
He did not rest satisfied with the observations of a few persons, but

extended them to thousands of persons, making casts and collecting skulls. To extend the range of his observations, Gall visited schools and colleges, insane asylums and prisons, and wherever he had hopes of getting persons distinguished for special talents or noted for anything peculiar. Their faculties were carefully noted, casts of their heads were taken, and special development recorded. Dr. Gall next, when the death of these persons offered an opportunity to get possession of their heads, removed the skull and found that the cerebral mass corresponded in every case with the abnormal developments of the skull. He found that when there was no prominence of the skull, but a depression, the convolutions were small or entirely wanting, and where there was a protuberance of the skull, the convolutions swelled out and completely filled the cavity made by the protuberance. Thus the labors of the neurologists were at an end; a resort to clinical and pathological or experimental methods was not absolutely necessary. But Gall and Spurzheim, with that indomitable zeal to prove all things beyond a possibility of a doubt which ever animated their professional career, followed up their investigations by these methods. It would be a long task to enumerate the catalog of cases confirmatory of the location and functions of the various organs they had thus established. Injuries to the brain, accidental or purposely induced, revealed the fact that the organs of the mental faculties had been truly located. Persons who had received a blow on the part of the brain where the phrenologists locate the organ of Color were known to be deprived of that faculty. So men who had been suddenly possessed with an irresistible desire to kill, or to gratify other desires connected with the primitive instincts, were discovered by phrenologists on removal of the skull to have the portion of the brain under the skull, where the organs of such propensities were situated, diseased. Though the organs were first discovered by the shape and form of the skull, yet by repeated observations the distinct convolutions or parts of convolutions connected with special dispositions were accurately named and marked out. So that by the situation of the convolutions themselves without the aid of the skull, the analysis of a person's character could be given. Spurzheim gave such readings on several occasions.

After cells are grouped together in convolutions, clearly the only method of observing them in the human mind is by the phrenological method. The only way to make a practical application of an analysis of the human mind to acquire a knowledge of character, is by the phrenological method. After the last item has been added to the knowledge of brain or body by the psychological or experimental school, the only way to apply this perfected knowledge of the human subject, in order to build up a science of character, is by the phrenological method, and if that method proves a failure, then we can never hope to behold a science of character. But there is nothing to indicate a failure on the part of Phrenology; so far, she is the only science of character, and her history in that respect is one of triumph.



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1. Flechsig's localization of thirty-six brain centers (from Tigerstedt's Physiology, 1906).—2. The latest revision of Phrenological localizations, by the Editor of the *Character Builder*, 1922; numbers explained in Chapter VII.

CHAPTER VIII

SELF-PROTECTING POWERS

(1) Love of Life. (2) Appetite. (3) Energy. (4) Courage. (5) Reserve. (6) Acquisitiveness. (?) Thrift.

These powers of mind function through the brain centers in the region around the upper part of the ear, and when strong give breadth to that part of the head. It is not difficult to estimate the individual functions of this group, and often when some of them are deficient others are abnormally strong. The beginner in the study of character analysis will find the caliper measurements helpful in estimating the developments of these powers, but experience makes it possible to give a fair estimate through observation and the sense of touch.

Love of Life. Gives the desire to live. When it is excessively developed it gives a dread of disease and death. When deficient there is a feeble resistance against disease and death. Dr. Gall held the existence of this fundamental power of life as probable, but it was definitely localized by Dr. Andrew Combe, who was physician to Queen Victoria, and to the King and Queen of the Belgians. Love of Life is located just back of the mastoid process, immediately behind the ear, and when excessively developed gives great width of the head in that region. It may account for the recovery of so many people even in this twentieth century after all hope is given up by their physicians. To cultivate this power one should meditate upon the possibilities for doing good in this life and should aim to so control all the powers and environments as to make life worth living. To restrain it when it is excessively developed one should look upon this life as a preparatory school for the future and think of the great opportunities offered by eternity.

Appetite. The normal expression of this power is to remind the individual to take nourishment at intervals to build up the body and keep it in proper repair. This power was localized by Drs. Hoppe and Crook. It is located in front of the upper region of the ear and appears to have a double

function, the back part giving a desire for solids and the front part for liquids. The abuses of this power are in drunkenness and gluttony, two evils that have done much to retard the progress of the human race. The determined effort that has been made for a century or more to prohibit the manufacture and sale of intoxicants promises to establish an environment that will make it easy to use this power normally as far as liquor is concerned, but it may take much longer for humanity to reach a standard where gluttony and wrong habits of eating will be abolished. Sir Henry Thompson, the most eminent authority on dietetics, says:

I have come to the conclusion that more than half the disease which embitters life is due to avoidable errors in diet,—and that more mischief, in the forms of actual disease, of impaired vigor and of shortened life, accrues to civilized man from erroneous habits of eating than from the habitual use of alcoholic drink, considerable as I know that evil to be.

Sir Benjamin Ward Richardson, M. D., the greatest sanitarian of his time, said:

If we consider the amount of ill temper, despondency, and general unhappiness which arises from want of proper digestion and assimilation of our food, it seems obviously well worth while to put forth every effort, and undergo any sacrifice, for the purpose of avoiding indigestion, with its resulting bodily ills; and yet year after year, from the cradle to the grave, we go on violating the plainest and simplest laws of health at the temptation of cooks, caterers, and confectioners, whose share in shortening the average term in human life is probably nearly equal to that of the combined armies and navies of the world.

When appetite is deficient there is lack of desire for necessary nourishment, and the person is so fastidious about foods that it is very difficult to satisfy his exacting taste. When appetite is too strong it needs to be kept under the control of the intellectual and moral powers. Persons who are fastidious in their eating can become more hearty by changing their environments and habits of life.

Energy. The normal expression of this power is activity, force, endurance and restlessness. It was discovered and localized by Dr. Gall. It is located immediately above the ear, and can be easily distinguished by the width or narrowness of the head in this region. When it is abnormally strong it often pitches the nerves upon a high key, and causes the individual to become too strenuous. This is especially true where either the nervous system, or else the nervous system and the motor

organs, predominate over the nutritive organs. This is the combination that Shakespeare had in mind when he quoted Julius Cæsar as saying :

If my name were liable to fear
I do not know the man I should avoid
As soon as that spare Cassius. He reads much,
He is a great observer, and he looks
Quite through the deeds of men.—

Such men are never at heart's ease
While they behold a greater than themselves,
And therefore are very dangerous.

—*Shakespeare, Julius Cæsar, Act I.*

Another expression of this power when it is abnormal is an ungovernable temper that is often a handicap to the individual who possesses it, and should be restrained through an environment where it is aroused as little as possible. The excessive development of energy is also manifested in revengefulness, severity, cruelty, sarcasm, brutality, animosity and malice. In restraining this tendency much help can be given by others who will endeavor to create an environment that will not arouse it. The teasing habit among children and adults is the most common cause of the abnormal development of this mental tendency. The individual who has this tendency strong must make a special effort to let reason and will power rule when there are annoyances that arouse energy. Some persons who are very efficient in other respects are handicapped throughout life by an ungovernable temper.

Courage. The normal expression of this power is self-defense, defense of others, force, aggressiveness, and resolution. This power was discovered by Dr. Gall. When it is abnormally strong it is the cause of quarrelsomeness, pugnacity, contention and fighting. When the intellect is well developed and this power is strong there is a love for debating and mental combat. When deficient the individual is likely to permit himself to be imposed upon without defending himself. It can be cultivated by defending one's own rights and the rights of others through debates and other similar activities that develop the aggressive tendencies. Courage is located immediately above Love of Life. There is often a difference of as much as two inches in the measurements of heads in this region, and the characteristics can easily be determined from a study of the developments. To restrain courage when it is

excessively developed a person should avoid unnecessary arguments and other expressions of self-assertion. When it is deficient it should be cultivated through assuming a more self-assertive attitude in all expressions of life.

Reserve. The instinct that gives tact, discretion, self-possession, and diplomacy. This instinct was localized by Dr. Gall. It is located above energy and back of thrift. When it is very strong the head is broad in this region, and it is indicated in the face by compressed lips and by the eyelids coming close together. The abnormal expression of this power is policy, evasion, hypocrisy, slyness, trickery, double-dealing and lying. When it is very deficient it causes one to be tactless and indiscreet, or blunt and outspoken, thus often wounding the feelings of friends. When it is too strong it can be restrained by confiding more in friends who are known to be worthy of confidence. Many people injure themselves permanently by brooding over troubles that could be easily disposed of if they were communicated to others who are in a position to help. When it is deficient, it can be cultivated by making an effort to keep one's thoughts to self. Many persons cause much mental discomfort to themselves and others through a lack of reserve in speech and action.

Acquisitiveness, and Thrift. These two mental tendencies have usually been treated under one heading, but it seems that they are different expressions of mind, and should really be treated under two different headings. Acquisitiveness consists in accumulating without any regard to hoarding, while thrift is the instinct that gives a tendency to save and hoard what has been accumulated. This instinct is found among some of the lower animals, the same as among human beings. The normal expression of it appears to be to store away in times of plenty for use in times of need. The bee gathers honey enough while the flowers are in bloom to last for a year, and sometimes an extra supply that is taken by the beekeeper. Squirrels, rats, and other similar animals store away a supply that carries them through the winter. If a bushel of wheat were placed before a chicken it would eat what it wants but would not store away any for future use because it lacks the acquisitive instinct. Geese, in cold climates, where the ice and snow make it impossible for them to get their food in winter, fly to warmer climates during the cold season, and then return to their old haunts when the ice and snow disappear. Thus they have been provided with an instinct that directs them to where

the food is when they lack the tendency to acquire and hoard it. Among human beings speculators and plungers acquire large sums of money in single business transactions. The money is often lost with the same rapidity and in equally large sums. Such individuals are millionaires today and paupers tomorrow. The miser may acquire his money in very small amounts, but he hoards it so carefully that it does not easily get away from him when it is once accumulated. The miser has the thrift instinct strong, while the plunger, speculator and gambler have the acquisitive instinct strong and may be lacking in thrift. Acquisitiveness and thrift are immediately above appetite, and in front of energy and reserve. When the acquiring tendencies are stronger than the hoarding the front region of this center is developed most. When the hoarding tendencies predominate the head is wider in the posterior region of this brain center. This sense of property was localized by Dr. Gall. He found it so strong in the most notorious thieves in some of the prisons he visited in the early history of his experiments that he named the instinct "Theft," but the terminology was later changed to "the sentiment of property," and for nearly a century it has been designated "acquisitiveness." It should always be kept in mind that the normal function of every power is good, and that all evil comes from the misuse of good powers. The abuse of the acquisitive instinct is theft, and it is questionable whether there was ever a time when it was more frequently perverted than in the present century, because of the great value that is placed upon what people have rather than what they are. In studying the statistics of an industrial school for boys it was found that out of 140 inmates 105 were there for taking things that did not belong to them. Our prisons and penitentiaries are full of men who are guilty of no other crime than taking things that do not belong to them. If all who are guilty of the abuse of this essential power of mind were placed in houses of detention it would be a heavy tax upon the nation to care for them. When acquisitiveness is too strong it can be restrained by furnishing an environment that will cause it to act normally. When it is deficient it can be cultivated through use, and by placing a higher estimate upon money. In ancient times the statement was made that the love of money is the root of all evil, and the experiences of many centuries indicate that there is much truth in that statement. Human happiness will be greatly increased when environments are so changed

that there will be less temptation than at present to abuse the acquisitive instinct.

These self-protecting powers are the first to awaken in the child and should receive the most careful direction from the earliest period of the child's life. The abuse of these essential powers of life is the chief cause of juvenile delinquency, and when humanity applies as much skill in harmonizing these powers in human beings as in detecting the guilty ones when damage is done there will be much more happiness in the world and much less vice and crime. Some inherit these self-protecting powers so strong that it is necessary to exercise care in furnishing an environment that will not arouse them to excessive action. Through right training and favorable environment the other powers of mind can be cultivated until the intellectual and moral powers are strong enough to keep these instincts of self-preservation under control. Before birth of a child the parents should act as if heredity is everything and environment nothing; after the birth of the child the parents should act as if heredity is nothing and environment everything. Many children who become wards of juvenile courts, reform schools, and other institutions of correction, are not badly organized, but are there because powers that were normal in development were abnormally exercised. In studying the boys and girls of the industrial schools of three states it was noticeable that most of them were not badly organized, but were there because their environments had not been properly controlled. The voice of the past century was rescue and cure; the motto of the present century must be prevention and normal development through right inheritance and properly controlled environments, that will result in each individual controlling his impulses from within, so that there will be no need of control from without.

CHAPTER IX

THE INTELLECT

The Intellect, in the classification used here, corresponds to the objective mind in the classification used by some psychologists, and to the conscious mind used by others. Under this classification we consider the powers that are used in observing, classifying and remembering things. When speaking of this division of mind the functions should be classed as intellectual. All the powers of the intellect are mental powers, but not all the powers of mind are intellectual. Many modern writers make the mistake of saying physical, mental, moral and spiritual, instead of physical, intellectual, moral and spiritual. Dr. Hollander, in his "Mental Functions of the Brain," page 3, calls attention to this inaccuracy in the following words:

Most men regard mind as though the term were equivalent to intellect and did not include the feelings and fundamental impulses. Thus when we state the first fundamental principle, that the brain is the organ of the mind, as to which we are supposed to be one and all agreed, we, in reality, differ widely according to the interpretation assigned to the word "mind."

The great majority hold mind to be equivalent to intellect, and from this opinion serious errors have arisen, which have retarded the progress of mental science. To such persons it is a puzzle that large brains should be found with poor intellect, and small brains with great wisdom. An explanation is sought for. Some there are who find the solution in differences in quality of the brain matter. This, however, is an insufficient explanation, for men of great intellectual ability, and apparently the same quality of brain, like Cuvier and Gambetta, occur, the one heading the list with the heaviest, while the other ranges at the bottom of the list with the lightest brain, Cuvier's brain weighing sixty-four ounces, and Gambetta's only thirty-nine, which is considerably below the alleged normal limit.

This supposed contradiction is explained on page 84 of Dr. Browne's work on "Education, Insanity and Prison Discipline," from which we have already quoted. Dr. Browne tells of the visit of Tiedemann, the eminent anatomist, to the phren-

ological museum of De Ville, in London. On entering this museum Tiedemann, because he had tested the capacity of a great many negro and European skulls by filling them with millet seed and finding that on the average those of the Africans were scarcely inferior in size to the skulls of the Europeans, believed that from that fact it was probable that the negro, if placed in advantageous circumstances, ought to be able to exhibit powers of mind equal to the European. In reporting the visit further, Dr. Browne says:

But when the humble, self-educated follower of Gall demonstrated to this celebrated physiologist and anatomist that the forehead of the negro is usually much smaller than that of the European, and that, moreover, its form, with few exceptions, is irregular and ill-balanced; and when he showed that the size of the negro skull in the basilar portion, where the organs of the affections (which we possess in common with the lower animals) lie, was, in proportion to the upper and anterior parts, which are the seats of the moral and intellectual faculties, larger in the negro than in the European—when De Ville showed, by many instances, that this is always and infallibly the case (with the exception of the heads of criminals), Tiedemann raised his hands and said, "The labor of years is now, I clearly see, of no use to me; and I must destroy many valuable things bearing upon this theme." Thus, by following the true mode of investigating this department of natural history, an uneducated man, of good talents, was enabled to correct a mistake in anatomy and physiology committed by one of the ablest anatomists that Europe has given birth to.

In recent books of psychology the frontal region of the brain, where Drs. Gall and Spurzheim located the intellectual powers, is labeled "higher psychical." On page 19 of "The Education of the Central Nervous System," by Reuben Post Halleck, M. A., is a quotation from Dr. McKendrick, as follows:

The frontal lobes appear to have to do with cognition and intellectual action. If so, the gray matter on the surface of the brain may be mapped out into three great areas,—an area concerned in cognitions and volitions in front, a motor or ideomotor area in the middle, and a sensory area behind.

The writers on physiology and psychology appear to be getting nearer together in their ideas of the localization of the functions of the brain, and there is hope that they will yet come to a unity of conception and expression in their study of psychology. All are now agreed that the first step in gathering facts is sensation, and that sensations are changed into percepts. Percepts are elaborated through judgment, or com-

parison, and through causality, or reason. Gall and his scientific followers hold that every power of the intellect has its own memory. This is well stated in "School and Fireside," by Dr. Karl G. Maeser, who spent fifty years in the schools of Europe and America, when he says:

The capacity for recollection is greatly diversified according to the physical organization of the individual. Phrenologically speaking, this capacity seldom extends harmoniously over all the various organs of perception in the brain. For instance, localities, names, dates, figures, forms, etc., are seldom recalled with equal vividness. Parents and teachers ought therefore to make it their object to discover any specially pronounced capability or defect in this regard, and instead of paying undue attention to an already well developed tendency, should rather endeavor to cultivate those parts in which recollection appears to encounter great difficulties. Scolding, censure, or other such means of correction are not only useless but absolutely unjust, for the educator is confronted by an organic deficiency rather than by a wilful neglect.

The intellect is divided into the perceptive powers, and the reflective, or reasoning powers. The perceptive powers are the first to awaken in childhood. First sensation, then perception and memory, then reason. Kindergartens that are conducted on a rational basis unfold the perceptive powers in a normal way, and at the same time adjust the social tendencies by training children to treat each other justly in their work and play. The Montessori schools are based upon similar principles and produce the same results. Kindergarten principles are being introduced into the primary grades in many schools, and it will be a happy day for our twentieth century education when all the work up to the university is based upon as good a psychological foundation as are the Kindergarten and Montessori systems.

The Perceptive powers are: Observation; Form; Size; Weight; Color; Order; Number; Eventuality; Locality; Time; Tune; and Speech.

Observation. In the "System of Phrenology," by George Combe, the following is given concerning this power:

This organ is situated in the middle of the lower part of the forehead, immediately above the top of the nose. When large, it produces breadth, projection, and descent between the eye-brows, at that part; when small, the eye-brows approach closely to each other, and lie in a horizontal line.

In surveying the external world, we may consider, first, objects simply as substances or existences, such as a rock, a horse, a tree, a man; these perceptions are designated by substantives; in the next place, the prop-

erties and relations of things which exist, such as their form, size, weight, and color. After these perceptions, we may notice their active phenomena; the rock falls, the horse runs, the tree grows, the man walks—these actions are designated by active verbs. As size, form, weight, and color, are adjuncts of physical existence, time is an adjunct of action. Now, the faculty of observation renders us observant of objects which exist; it gives the notion of substance, and forms the class of ideas represented by substantive nouns when used without an adjective, as rock, man, horse.

The faculty gives the desire, accompanied with the ability, to know objects as mere existences, without regard to their modes of action, or the purposes to which they may be subservient. Individuals in whom it is large, will observe and examine an object with intense delight, without the least consideration to what it may be applied—a quality of mind which is almost incomprehensible to persons in whom this organ is small and causality large. It prompts to observation, and is a great element in a genius for those sciences which consist in a knowledge of specific existence, such as natural history. It leads to giving a specific form to all the ideas entertained by the mind. A student in whom this organ is small, and the reflecting organs large, may have his mind stored with general principles of science, and with abstract ideas, but will experience much difficulty in reducing them into precise and specific forms. Another, in whom this organ is large, will have all his knowledge individualized: if he hear lectures or conversation in which general views chiefly are presented, he will render them specific for himself; but unless his reflecting organs also be large, he will be prone to miss the essential principle, to seize upon the most palpable circumstance attending it, and to embrace this as his conception of it. Such persons are learned, and, owing to the store of facts with which their memories are replenished, the great definiteness and precision of their ideas, and the readiness with which they command them, they often take a lead in public business: but if their reflective organs be deficient, they show no depth or comprehensiveness of understanding; they do not advance the principles of science, and rarely acquire a permanent reputation.

In common life, a great development of this organ confers a talent for observation, curiosity to know, and aptitude for acquiring knowledge of details.

Dr. Gall calls this power the “sense of things, and the memory of things—the sense and the memory of facts.” He includes with this what is now known as eventuality, and names it “educability and perfectability.” Dr. Spurzheim divided the faculty into its elementary parts, of observation and eventuality. This latter faculty is closely associated with the speech center, in forming what is called the verbal memory. This connection is not yet thoroughly understood, and furnishes a field for future discoveries.

Form. This faculty of the intellect gives perception and memory of the forms and figures of objects. Form proceeds forward over the inner portion of the thin plate of bone which

forms the roof of the orbit of the eye, till it comes to within about half an inch of the brow, where it is crossed by the convolution through which the faculty of size functions. This faculty was localized by Dr. Gall. It is essential in spelling, writing, drawing, mechanism, art, and designing. It is located on either side of observation, and when large it has a tendency to push the eyeballs apart, causing considerable width between the eyes. When it is small the eyes are near together, and there is a pinched expression in that region of the face. When it is abnormally strong a person is supersensitive regarding the form of things. When it is deficient there is incapacity to distinguish the shapes of objects. It can be cultivated through giving attention to the phases of art that bring it into action, and when it is too strong it can be restrained by forcing oneself to be less critical and sensitive to the form of things.

Size. This faculty gives perception and memory of sizes or dimensions. It was localized by Dr. Spurzheim. It gives ability and power to judge magnitude in general, as well as distance, height and depth. It is located outward from form and observation. When this is abnormally strong a person is annoyed by the mere sight of disproportion, and is likely to bestow extra time upon anything in order to obtain accuracy in developing proper proportions. When it is deficient there is a feeble tendency to notice the proportions of things, and a lack of ability to estimate sizes and distances.

Weight. This faculty gives the perception and memory of gravity and resistance, ability in estimating the weight of persons and objects, and in balancing the body. It was localized by Dr. Spurzheim. It gives the power of balance, or sense of equilibrium, and its possession is a valuable asset to the acrobat. This is one of the essential powers to give ability in estimating the weight of persons, animals and other things. When it is abnormally strong a person is liable to attempt dangerous feats in balancing, and when it is deficient there is lack of ability in balancing oneself and in estimating weight. It is quite likely that this faculty is essential to builders who are compelled to balance themselves in dangerous places upon high buildings. To restrain it one should keep in mind the serious accidents that have resulted when individuals have taken too great chances in dangerous places. It can be cultivated by practicing gymnastics, by skating, cycling, aviation, and other feats that require ability in balancing.

Color. The function of this faculty is to give perception and memory of the various tints and colors in art and nature. It is located in the center of the arch of the eyebrow, and when large gives upward and forward arching to it. It should be especially strong in color artists, and is very deficient in persons who are color blind. While giving tests to the students of a university the writer found two students who were so deficient in the color sense in distinguishing shades of red that they said they could not see ripe strawberries in the patch, or ripe cherries upon the tree, when they were there. This faculty was localized by Dr. Gall. Lord Jeffrey, in noticing Combe's account of Gall's discovery, said, in the *Edinburgh Review*, October, 1826:

So far is it from being true that we do not perceive color by the eye, that in reality it is color, and color alone, that is the primary object of its perceptions. What we see, indeed, is only light; but light is always colored (if we include white as a color), and the different colors are in reality but so many kinds of light. To say that we do not see color by the eye is in reality to say that we do not see at all, for the strict and ultimate fact is that we never see anything else.

In commenting on this Dr. B. Hollander says, on page 267 of his scholarly work, "*The Mental Functions of the Brain*":

The folly of the blind opposition to everything that emanated from Gall, or from phrenologists, is made evident here, for it took nearly a century to rediscover the simple fact that the appreciation of colors has its seat in the brain and not in the eye. When will such silly opposition cease? Gall made his statements in good faith; why not examine them aright and in equally good faith?

What Gall knew at the close of the eighteenth century is only just dawning upon the scientists of the present day. Thus in a paper on Color-blindness contributed to vol. v., part 2, of the *Proceedings of the Bristol Naturalists' Society*, in 1887, Professor W. Ramsay suggests that the particular defect which causes color-blindness may lie in the brain, not in the eye. Certain persons, as he points out, are incapable of judging which of two musical tones is the higher, even when they are more than an octave apart. Yet such persons hear either tone perfectly; the defect is not one of deafness. "It must be concluded," says Professor Ramsay, "that in such a case the brain is the defaulter. And it may equally well be the case that the inability to perceive certain colors is not due to a defect in the instrument of sight—the eye, but to the power of interpreting the impressions conveyed to the eye by the optic nerve. If this be the case, the problem is no longer a physical one, it falls among those with which the mental physiologist has to deal."

The following is also quoted from the same book by Dr. Hollander:

Dr. Dalton, the most famous example of color-blindness, had a deficient development of one of the supra-orbital convolutions in the region where Gall placed the sense of color. Mr. Ransome, the medical attendant of Dr. Dalton, declared that the eyes, on dissection, showed no unusual appearance. No account of the brain was given publicly, but the following is an extract relating to it, from a letter of Mr. Ransome's on March 20, 1845, to his friend, Mr. Phillip Holland, a Manchester surgeon: "I have very little to add to the account of Dr. Dalton's eyes, which I sent to Mr. Stanley. (This surgeon read a paper on the subject to the Royal Medical and Chirurgical Society, March 1, 1845.) There was no disease or change of structure in the anterior lobes of the brain, but a deficiency in size and development of one of the small convolutions resting on the orbital plate. Mr. Bally took a cast, of which I have no doubt you could procure a copy." Mr. George Combe writes on the subject that "Mr. W. Bally of Manchester had made a cast of the orbital plates, on inspecting which he had ascertained the correctness of the statement in the newspapers, that it presented a high ridge indenting the brain at the situation of each organ of color." This smallness of the organs was also remarkable in the bust of Dr. Dalton modelled by Cardwell, and Mr. Bally has stated that "its real size is still less than it appears in consequence of the thickness of the bone behind the frontal ridge." In another letter, written shortly before the above, to Mr. Stanley, Mr. Ransome says: "I ought in fairness to state (though no phrenologist), that there was marked deficiency in the convolutions of the brain over the orbital plates which are assigned to the organ of color. VALEAT QUANTUM and give the fact."

The Manchester Courier, of August 17, 1844, contained the following announcement: "Mr. Bally of King Street has just completed an exquisite little bust of the lamented philosopher reduced from a cast taken after death. In height it is about eight inches, and, being a facsimile of the one taken after death, is one of the best likenesses we have yet seen. Mr. Bally has also taken a cast of the philosopher's brain, which possesses a very remarkable feature in its organization. It is well known that Dalton was unable to distinguish colors, and we find that on both sides of the frontal sinus the phrenological organ answering to the faculty is singularly defective, there being a high ridge, and corresponding indent in the brain, precisely where the organ is placed by phrenologists."

Dr. Wilson, in the *Journal of Psych. Medicine*, 1856, p. 106, wrote: "Here then, according to the judgment of those present, there appeared a marked deficiency of that portion of the brain which phrenologists regard as the organ of color, in the person of the most famous example of color-blindness; and though he were not famous, his case would deserve record, as the solitary one where the brain itself was examined."

Dr. Hollander further quotes the following cases:

Dr. Samuelsohn had a case under his charge, where, after an apoplectic seizure, the sense of space and light was intact, but where the color-sense was utterly extinguished. (*Centralblatt fuer die med. Wissenschaften*, 1882, p. 851.)

Steffen had a similar case, and concludes from it "that in the main central organ, the brain, the centers for the sense of 'space,' and

for the sense of 'color' are divided, no matter how near to each other they may be estimated, but there is a special center for each of these senses.'" (Graefe's Archiv, vol. xxvii., p. 6.)

Similar observations were made by Bjernum, Brill, Cohen, Foerster, Schnelle, etc.

When the perception of color is very strong the individual is pained by seeing combinations of colors that do not harmonize. When it is deficient the individual has very little talent for matching colors, or studying right combinations. Women usually have the talent for combining colors much better developed than men. Unless it is entirely lacking, as in the case of Dr. Dalton, it can be cultivated through use. When it is excessively developed it can be restrained by avoiding conditions that arouse it.

Order. This faculty gives perception and memory of system, arrangement and method. It gives a desire to have a place for everything, and to keep everything in its place. This faculty was localized by Dr. Spurzheim. When it is abnormally strong it causes fastidiousness, and may produce a tendency for too much organizing, and to give too much attention to detail. When there is a deficiency there is a tendency to disorderliness and slovenliness, as well as lack of method. When it is too strong it should be restrained by worrying less about details in little things, and giving more attention to the larger phases of the work in hand. When it is deficient and needs cultivating more attention should be given to detail, and the individual should force himself to be orderly, systematic, neat, and methodical in everything that he does, keeping in mind the suggestion, "Let all things be done decently and in order."

Number. This is the faculty of mind that perceives and recollects numbers. In some it is abnormally strong; in others, very deficient. George Combe, the eminent Scotch philosopher, of whom Horace Mann said that in the twentieth century he would be looked upon as the greatest man of the nineteenth, said of himself:

Arithmetic has always been a profound mystery to me, and to master the multiplication table an insurmountable task. I could not now tell how much eight times nine are, without going to work circuitously and reaching it by means of the ten, yet for seven years I studied arithmetic. The faculty in me is, in fact, idiotic. Were any other powers in like condition, I should be totally unfit for the ordinary business of life.

On the other hand some persons of very ordinary talent in everything but computing numbers show extraordinary ability in this one thing. Dr. Hollander on page 247 of "Mental Functions of the Brain," says:

Zerah Colburn was exhibited as an arithmetical prodigy at an early age, though otherwise a backward idiot. When six years old he answered at Boston such questions as "How many seconds are there in 2000 years?" with greater rapidity than they could be solved on paper. The extraction of the roots of exact squares and cubes was done with very little effort. At this time he was unable to read, and ignorant of the name or properties of nine units traced on paper.

The following summer Zerah's father took him to England, and at a meeting of friends he succeeded in raising the number eight to the sixteenth power.

He was exhibited in Paris in 1814, and examined by members of the French Institute, among whom was La Place. Gall, who examined the boy without any previous intimation of his character, discovered readily certain peculiarities in the shape of the head (a projecting orbital arch on the sides of the eyebrows) which indicated the presence of a faculty for computation.

The life of George Bidder is even more interesting than that of Zerah Colburn, because in addition to strong number he had well developed reasoning powers, and became eminent as an engineer and finally became President of the Institution of Civil Engineering in England. There are numerous other cases similar to these that verify the individual work of the faculty of number. This power was localized by Dr. Gall.

On page 17 of his book on "Education, Insanity and Prison Discipline," James P. Browne gives the following interesting account of Jedediah Buxton, a poor illiterate day laborer:

This simple man was, perhaps, the most wonderful genius in mental arithmetic that ever lived, and yet he was ignorant of the ordinary affairs of life. So exclusively active was the faculty of numbers in him that, on one occasion, while in London, being brought to see Garrick perform one of his great characters, instead of directing his undivided attention to the inimitable and captivating acting of that superb player, his mind was directed solely to the counting of the number of words uttered by Garrick during the play. For, on being asked how he liked the actor, he replied that he had spoken a certain number of words during the performance, and he stated the number with the greatest exactness.

Eventuality. Dr. Gall included this organ with observation. Concerning it he said:

The human forehead not only rises above the orbits, but often projects beyond the level of the eyes. A physician, the inferior anterior middle part of whose forehead was large, but upper frontal retreating, was always brilliant in company; knew something about all subjects, adopted all new theories, Stahl's, Peter Frank's, and the murderous doctrine of Brown, prescribing nothing but opium, &c.; made a panacea of every new medicament; and accepted all new views without testing them by experiment. I have always observed that those similarly organized are like bees, gleaning from the productions of others. I predicated what one of the founders of a new sect at Berne would teach, and he had charge of the dissemination of this new doctrine. In Gaultier, the author of many elementary works on education, the whole forehead, but particularly its lower middle part, is very prominent.

After discovering verbal memory, I was not long in perceiving that there were also other kinds, sometimes strong in some and weak in others. Ever since before 1800, I taught both this doctrine, and that memory is not a primary faculty, but a general attribute of every fundamental power; that there are as many different kinds of memory as there are different faculties; that music recalls tunes; calculation numbers; locality places; &c. Those with educability large learn with extreme facility; have a general love of knowledge, and aptness for learning; and readily adopt new doctrines, manners, and customs. Young animals and children learn easier than adults. Frequently, when three months old, infantile foreheads advance in the middle far before the rest, forming an elongated prominence extending from the root of the nose to the middle of the forehead. It is the great development of the inferior anterior middle convolutions which gives to children their extraordinary educability and rapidity of appropriating a prodigious amount of impressions from the external world. My numberless observations leave not the slightest doubt that educability is a fundamental faculty, whose organ is in the inferior anterior middle of the forehead.

Educability was separated by Dr. Spurzheim, as he recognized that "observation" and "eventuality" were distinct functions. The following comments were made by him on eventuality:

This faculty recognizes the activity of every other, and in turn acts upon all; desires to experience, and would taste, smell, see, hear, and touch; loves general instruction and the practical pursuit of knowledge; is often styled good sense; is essential to editors, secretaries, historians, and teachers; contributes essentially to consciousness; and perceives the impressions made by the external senses, which it changes into notions, conceptions, and ideas, and gives attention. Its sphere is great, and expressed by verbs.

George Combe gives the following very interesting case where this faculty was strong:

In Mrs. T., Eventuality and Time are unusually developed, occupying nearly half the intellectual region, and giving her forehead quite an

arched or semicircular appearance, and she is a complete walking almanac, an animated calendar of births, deaths, historical occurrences, and events generally, and has been from childhood a never-failing family book of reference. Eventuality prompts to investigation by experiment.

J. P. Browne, M. D., in his book on "Education, Insanity and Prison Discipline," says, on page 453 :

Eventuality is not content to rest satisfied with a knowledge of things external. As the special appreciation of phenomena it embraces the workings of the reflectives—causality and comparison. And as the most affecting and emotional of phenomena consists of the moral and religious sentiments and animal propensities, eventuality must become conscious of their presence also. Hence, it should be looked upon as a central repertory of knowledge. Its innate characteristic is the love of knowledge. To this end it is, to use an expression of Burke's, "omnivorous," but it is not capable of selecting its food, except through the intervention of auxiliaries, which according to the measure of their power to discern, might contribute what was wholesome or unprofitable, or, may be, erroneous. In such an emergency to discriminate is beyond its power.

Seeing then that this organ of eventuality is the only one that can become sensible of the existence and of the special functions of all the other organs, whether they relate to external things or to inward thoughts and feelings, it follows, in the course of reason, that it must embrace within its sphere of action the notion of the entity Self. And for the same reason it seems right to assume that it is also the true seat of Consciousness, that mysterious abode so long sought for in vain by the most able students of metaphysical science.

If this is the case, eventuality is the only faculty that is capable of comprehending, not only the existence of the several faculties, but also their modes of action, both individually and collectively. And as action implies motion and change, it must be desirous of noticing the changeful and changing conditions of things. The truth of this *a priori* inference is confirmed by the fact that men, who evince a decided predilection for political pursuits, independently of ambitious motives, are possessed of a superior development of this organ. It is a marked feature of the forehead of a vigilant and attentive administrator of affairs when they are at all numerous and diversified.

Eventuality is flat in new-born children. But the rapid increase of development in this part of the forehead is observable at a very early period. This increase is owing to the active exercise which devolves upon this organ through the incessant curiosity of infants, whose attention is awakened by everything that comes before them.

As the desire of gaining knowledge, in the general acceptation of the term, and also of communicating it, is certainly an attribute of this faculty, it follows that its own attention is directed to the exciting of the attention of the other intellectual powers. In this, of course, it would be successful in proportion to the native power of each primitive faculty, and no farther.

To it is to be referred the conception of the existence of pleasure and pain, whether these be of the mind or of the body. And here,

consequently, is to be found the true cerebral seat of Consciousness. Here alone is entertained a conception of the existence of the entity Self. It is the place where all the varied attributes and characteristics of Self meet in concentrated unity.

This view expressed by Dr. Browne regarding the center of consciousness harmonizes with the findings of Dr. E. D. Babbitt, one of the most eminent philosophers of the past century, as recorded in his book, "Human Culture and Cure," page 262:

The central region of consciousness includes the frontal lobes of the brain, where reasoning and perception take place, but the other organs contribute somewhat to the same. Animals have consciousness and reasoning powers in an imperfect degree, have often acute sensations and some of their perceptions, for instance, by means of smell or sight are more developed in a certain way, than those of human beings. A dog is able to trace the course of his master or other human beings by the sense of smell but has not the refinement of human affection or taste, as he will smell and eat things that we consider disgusting. When the blood and nerve ethers are drawn from the front brain, unconsciousness ensues and we call it sleep. When by a severe shock or by narcotics the brain becomes congested, the pressure of blood upon the nerves shuts the ethereal currents away from the front brain and a very imperfect kind of sleep takes place.

How much more sensible this explanation of the seat of consciousness is than the metaphysical speculation about it which locates it in the pineal gland. How fundamental Dr. Gall was in his observation and in his terminology when he named this organ "Educability," because those young persons who have it large acquire general information easily. He also agreed with Camper and Lavater that animals are tamable in proportion to the fullness of this organ. It is certain that tame and tamable animals are fuller in the center of the forehead than wild, untamable ones. On the score card for horses issued by agricultural colleges the statement is made that the full forehead is a sign of intelligence. If a full forehead in the lower animals is a sign of intelligence it is reasonable to believe that the proportionate development in this region of the human head indicates the intellectual tendencies of persons.

Excessive development of eventuality gives such an ardent desire to know things that it may sometimes cause prying tendencies and troublesome questioning. When there is a deficiency of this faculty there is a lack of ability to recall things.

The organ of eventuality lies exactly in the center of the forehead. The reflective or reasoning organs are above it, observation is below, and locality is on either side.

Locality. The function of this faculty is perception and memory of space, places and directions. This was first discovered by Dr. Gall, and in speaking of its development in his own character he said:

My taste for natural history often led me to make excursions for the purpose of procuring specimens; I was generally successful in these expeditions, from my knowledge of the habits and manners of the different species; but, if I returned to the woods and forests in a few days afterwards to visit my nets, or to obtain the birds' nests I had previously discovered, I almost always lost myself, notwithstanding all the pains I might have taken to mark the spots; this forced me to take one of my companions with me as a guide; this young man, although possessing but slender abilities, could always lead me to the desired place. When I demanded of him how it was that he never mistook his way, his constant reply was, that he could not understand how any one could lose themselves. I therefore took a cast of his head, and sought for other persons who were distinguished for the same faculty; this led, in a short time, to the discovery of this organ, which, however, must not be confounded with the prominences produced by the frontal sinuses. These are generally horizontal, and situated close to the eyebrows, whilst the two projections of the organ of locality extend in an oblique direction from the root of the nose to the middle of the forehead.

In explaining the general functions of this mental power Dr. Gall says:

This sense is indispensable to brutes, in order to find their dens, homes, nests, kennels, and young. How could they do without it, or how migrate, yet return to their former places, and even bushes? Memory Thompson, a London physician, at two sittings, without plan, compass, book or anything but memory, drew a correct plan of the entire parish of St. James, with many parts of Mary le Bonne, St. Anne, and St. Martin, containing all the places, streets, courts, passages, markets, churches, chapels, public edifices, stables, corners of houses, and even pumps, trees, railings, sheds, an exact plan of the Carlton House, and Palace of St. James, and a like plan of St. Andrews, and declared he could make as good a one of St. Giles, St. Paul, Covent Garden, St. Clement, and New Church. Name any building whatever in some large street, and he will tell instantly what business is carried on in it, and everything about it.

When locality is excessively developed and the domestic affections, especially love of home, deficient, there is an inordinate desire to travel and see new localities. A deficiency is

manifested in lack of ability to recognize places, even after having seen them repeatedly.

Time. This is the faculty that measures the duration of time. It is situated between locality and tune. Dr. Gall treated it in connection with tune, under the term "music," but his most eminent student, Dr. Spurzheim, recognized that its function is different from that of tune and therefore made the division and named this faculty "time." He said:

Time perceives the duration, simultaneousness, and succession of phenomena; is one of the essential attributes of music, some musicians having great facility, others great difficulty, in playing to time, and is situated between locality and tune.

James Simpson, an associate of George Combe, made a careful study of this faculty, and gave a report in vol. 2 of the *Edinburgh Phrenological Journal*, page 134, as follows:

We have found the organ largely developed in those who show an intuitive knowledge of the lapse of minutes and hours, so as to name the time of the day, without having recourse to the clock; and also in those who perceive those minuter divisions, and their harmonious relations, which constitute rhythm, and who, when they apply the tact to music, are called good timists,—a distinct power from that of the mere melodist, and often wanting in him; while it is matter of the commonest observation, on the other hand, that this sensibility to rhythm, called time, is marked in many of those who have a very moderate perception of melody.

When time is abnormally strong it makes a person super-sensitive to discord in music, or in the affairs of life. When there is a deficiency there is a lack of ability to estimate time. Like all other powers of mind, time can be cultivated through use, and can be restrained through inactivity.

Tune. This faculty gives perception and memory of melody, pitch and harmony. It is located outward from time and upward from order and number. It was first localized by Dr. Gall, and he gives the following account of his discovery:

A girl five years old was shown me that repeated all she had ever heard sung or played on the piano, and retained whole concerts she had heard but twice, yet learned nothing else. This turned my attention to memory, when I found many who had an excellent memory for certain objects, with a feeble one for others, and I admitted a memory of tones. I found those who excelled in remembering tones were usually good singers, and I concluded that this talent extends much beyond this kind of memory, and comprehends whatever relates to tones. I observed the heads of celebrated musicians, several of whom had the

superior lateral part of the forehead narrow, but the temporal part broad, their foreheads thus forming a segment of a truncated cone, which I thought the external sign of musical genins. But I soon found that Beethoven, Mozart, Kreibig, &c., had the superior part of the forehead large, which made me renounce the truncated-cone form. I moulded the heads of several musicians of the highest merit, and finally discerned its location, along with the counter proofs of its deficiency. After this I taught it boldly.

In "Mental Functions of the Brain," page 228, Dr. Hollander says:

The following casts, taken from living heads—all contemporaries—were in Gall's collection: Beethoven, Mozart, Haydn, Gluck, Liszt, Kreibig (the accompanist of Emperor Josef II.), Marchesi, Catalani, Rossini, and numerous others, whose names would not be known at the present day, except by persons intimately acquainted with the history of music. Gall analyzed the history of Handel, Mozart, and other musical prodigies; described the musical disposition as it exists sometimes in idiots and the insane, and examined the differences in brain-structure of singing and ordinary birds.

In his *ATLAS OF BRAIN PLATES*, the center for the appreciation of the relation of tones is placed over the fissure of Sylvius, in the upper and lateral part of the forehead, in the temporal region almost bordering on the supra-orbital ridge, which part, when prominent as in musicians, appears broader than the inferior part of the forehead between the external angles of the eyes.

How correct Gall was in recognizing singing-birds by the shape of the head is related by Prince Metternich, the famous Chancellor and life-long patron of Gall, who used to accompany him to the Central Market in Vienna for the selection of singing-birds. To illustrate Gall's capacity, I would mention also that in the Paris collection there is a mask of Liszt labelled by Gall: "Liszt. A mask taken from the living head. A young Hungarian who very early displayed a great talent for music, and cultivated it with enthusiasm. The formation of the tone-center is very striking in the mask." Now, Gall's successor, Dr. Fossati, who had also examined Liszt's head, is reported in the *Lancet*, 1834, p. 898, to have said that, "altho the shape of the forehead of Liszt has some analogy with that of Weber, yet he feared this young artist, with all his talent, was not capable of producing anything to be compared with works of a higher worth." We, who have known Liszt in his later days, can certify that this prognosis, given by the phrenologist when Liszt was still a youth, proved quite correct. Liszt remained one of the best of performers, but his compositions were of minor value.

One of the most remarkable cases in history of strong tune and ordinary development of the rest of the powers is "Blind Tom," the pianist. His physical organization indicated a strong development of the faculty of tune. All of his perceptive powers were strong, and comparison was much stronger

than causality. While he showed remarkable talent for remembering and reproducing musical selections he had only ordinary ability along other lines. Excessive development of tune gives a mania for music and singing. When it is deficient there is a lack of ability to detect musical discords and a lack of modulation of the voice, so that there is likely to be a monotony in speaking.

Speech. The speech center is in the third frontal convolution of the brain, and when strongly developed presses upon the supra-orbital plate, pressing the eye forward and giving a fullness underneath it. The center was localized by Gall, and it was the first faculty of the mind that he discovered. In "Lectures on Diseases of the Nervous System," by Jerome K. Bauduy, M. D., the following account of the discovery of the speech center is given on page 413:

Dr. Gall, a German physician, announced to the scientific world, at the beginning of the nineteenth century, that there was in the brain a distinct, separate, and individual organ, whose physiological functions were to preside over the formation and retention of words and language, and that this organ was located in that part of the cerebrum situated upon the posterior part of the supra-orbital plates.

In 1825, Prof. Bouillaud, of Paris, pointed out the remarkable connection existing between loss of speech and diseases of the anterior cerebral lobes,—a deduction based upon the study and observation of one hundred and three pathological cases. In all of these he found, in consequence of a serious disease of the anterior lobes of the brain, more or less aphasia, or impairment of speech, during life.

Bouillaud's doctrine about the location of the organ of articulate language in the anterior cerebral lobes created much discussion, and was violently attacked in the Academy of Medicine, in Paris; until Bouillaud, confident in the correctness of his deductions, finally offered to wager five hundred francs,—to be given to any one who could by pathological cases prove the fallacy of his conclusions. For a long time succeeding this proposal the important subject seems to have elicited but little attention.

Bouillaud's doctrine survived and was not much weakened, for in 1836 Dr. M. Dax, basing his conclusions upon a careful observation of one hundred and forty cases, went further, and located the power of language in the left anterior lobe of the cerebrum; and in 1863 his son, Dr. G. Dax, made another step forward, and maintained, with his father, that aphasia was always the result of a lesion of the left hemisphere, and also that the organ of language was situated in the anterior and outer part of the middle lobe. This announcement also led to a considerable discussion in the French Academy at Paris, some of the learned members strongly attacking the doctrine of Bouillaud, which found an ardent champion in Dr. Auburtin. During the discussion, Dr. Broca stated that he had then under his charge an individual suffering from aphasia, who had been in that condition for upwards of fifteen

years without any hemiplegia or other form of paralysis. He was answered by Dr. Auburtin, who said that if the patient died, and a post-mortem examination did not evince any pathological condition of the anterior lobes, he would positively reject Bouillaud's theory. Dr. Broca, on the other hand, pledged his honor and his reputation that if a lesion of the left anterior lobe were found, he would cease all opposition to Bouillaud's doctrine, and would support it as ardently as he had combated it.

The case of Dr. Broca's patient has now become a historical one. To his own misfortune, but to the great convenience of the pathologists, this patient fell a victim to his erysipelas; and in his skull were hidden mysteries which, by a post-mortem examination, Dr. Broca and Dr. Auburtin were so anxious to unravel. And what do you suppose they found? They found a limited and restricted disease of the left anterior lobe, just as had been pointed out by Dr. Dax.

Now Dr. Broca takes up the position which he had before assailed, and becomes a vigorous supporter of the doctrine that there is a definite organ in the brain presiding over the development of speech, and that it is situated in the left anterior lobe: he invites everybody to discuss the subject with him in the Academy, writes memoirs of a number of pathological cases, and goes one step further, stating that the faculty of language is not only situated in the left anterior lobe, but is also limited to a small portion of this lobe,—namely, to the posterior part of the third left frontal convolution.

Thus we see how Broca was forced into accepting the localization of the speech center half a century after Dr. Gall had discovered and localized it. Instead of calling the brain center, through which speech functions, Broca's convolution, it should be called Gall's convolution. Sir Samuel Wilkes, M. D., who was President of the Royal College of Physicians, in speaking of Gall's discovery of aphasia and the speech center, said: (Guy's Hospital Reports, 1879, vol. xxiv.)

It is well known that Gall was first impelled to the study of phrenology by having observed, while at college, the great differences in the mental faculties of his fellow students and the association of those faculties, as he thought, with peculiar conformations of the head. His first observations had reference to the different degrees of facility with which they acquired languages, and this aptness he connected with prominence of the eyes; he was thus led to place the organ of language over the eye. Whatever amount of truth there may be in the phrenological doctrine, it is remarkable that Gall was right in placing the seat of language in that neighborhood, for numerous instances of disease and injury speedily came before him and his followers, by which the whole system of phrenology seems to be established. The doctrine was thus expressed: "The power by which we employ signs to represent our ideas and feelings is connected, not merely with the anterior lobes of the brain, but with that portion of these lobes which rests on the center of the orbital plate," or in the words of Gall himself, which are not exactly similar, "the manifestation of verbal language depends on a cerebral organ,

and this cerebral organ lies on the posterior part of the superior orbital plate."

In whatever way we may regard the first inquiries of Gall, it is interesting to see with what enthusiasm the phrenologists set about proving their doctrine as to the seat of language. The earlier volumes of their "Transactions" contain numerous cases of aphasia connected with disease of the brain, which, no doubt, involved the third anterior convolution. *The description of these cases is most excellent, and the aphasic condition seems so perfectly understood, that it is really surprising why all that is known about it nowadays should not have been taught equally well fifty years ago.* Our works on physiology, strangely enough, were silent on the subject of speech in connection with any localized seat in the brain, while a heterodox literature contained the whole of the facts which have only just now been taught in the schools.

One can only account for the ignorance of physiologists and the medical profession of well-established doctrines, by their antipathy towards the phrenological school, which prevented any of its literature entering the portals of our college libraries.

As most modern writings on aphasia entirely exclude the work performed by phrenologists, although done anterior to that usually quoted, I will offer the notes of some cases taken from their "Reports and Transactions." (Here follow the notes.)

A common disease of the speech center, which involves a partial or complete loss of the faculty of intelligent speech, is known as aphasia. It is not caused by any injury to the vocal organs, but by some lesion in the brain. The process of speech in the cerebral cortex is both sensory and motor; hence there can be both sensory and motor aphasia. There are many scientists who think that the speech center is located on the left side of the brain only, and that in case of aphasia only the one side is injured, but there are very good authorities who hold that the speech center is located on both sides of the brain. In his "Lectures" on this subject, from which quotations have already been made, Dr. Bauduy said, on page 423:

I have frequently told you that the brain is essentially a dual organ, composed of two symmetrical hemispheres, the functions of one being identical with those of the other: therefore I believe, with Maudsley, that it seems absurd to imagine the faculty of language or of speech to be located in only one side of the brain, and that it is far more rational, logical, philosophical, and probable that the different nervous centers are distributed equally on both sides. It might be, therefore, that the organ of language is situated in the posterior portion of the third frontal convolutions, not only in the left but also in both hemispheres. I have exemplified the duality of the brain in several of my lectures: I have told you how it is possible to have a congestion or an inflammation in certain parts of one hemisphere, with but little evidence, or few symptoms, of a cerebral pathological condition, provided the other hemisphere be healthy and perform double or compensatory duty.

This power of one portion to take upon itself the work of another part is not limited to the brain: it is common to all dual organs. You all know that it is not at all uncommon to have a disease of one entire lung; respiration may still be carried on by increased functional activity of the other. All these and many other considerations allow us safely to conclude that the organ of speech is situated in both hemispheres, and not in the left one alone, as is contended by Broca and Dax.

Within the past few months an interesting case came under the personal observation of the writer. An aeroplane mechanic was struck on the left temple by the starting of the propeller, and for some months he was in the hospital, partially paralyzed, and unable to speak. An operation was performed, in which a portion of bone from his leg was put in the place of a piece of the skull which had been removed, and after this operation he began to gradually overcome his paralysis. Prior to this operation, however, he had recovered his power of speech to the extent of being able to say four words, though it was difficult to understand one or two of these. After the operation he continued to slowly recover his speech. During this time that his speech was returning he would complain of pain, or headache, over the right eye, indicating that the center on that side of the brain was becoming active and beginning to function as the speech center.

To give our readers a practical illustration of aphasia we quote the following from "Practical Lessons in Psychology," by William O. Krohn, Ph. D., page 79:

An interesting case is reported by Doctors Carson and Brenner, of St. Louis. The patient is a healthy and well-built man of about twenty-one years. Two weeks previous to the doctors' visit he went to a wedding, became intoxicated, and on his way home fell between the joists of a new building. This was his statement subsequent to his recovery after the operation. He went home and was found asleep in the kitchen of his parent's house the following morning. Except what appeared to be the effects of the liquor he seemed to be in his usual health. In fact, nothing was mentioned by him with reference to his fall. Being out of work, he stayed at home and rarely left the house, complaining off and on of a dull headache on the left side of the forehead, which became more violent in the afternoon. After about one week he began to stroll about his home. While walking on the street about one block from the house he suddenly became unconscious and fell. This unconsciousness did not last long, however, and he was assisted home by a person who was near at the time. Soon after, it was discovered by his family that he had some difficulty in speaking. He now for the first time intimated to his family that he met with an accident on the night of the wedding.

There was no trace of any injury to his head. He understood every word that was spoken to him, every question that was asked. Unfortu-

nately, although not entirely illiterate, the patient was not possessed of sufficient education to render very profitable the examinations with a view to discovering the particular form of aphasia. Only the most elementary questions could be asked of him, the scope of his intellect being limited. In order to test his mental caliber and ascertain the nature of the trouble in his speech a number of questions were asked. The principal ones were:

"Q. Do you know what this is (showing him a glass)?"

"Ans. Zer."

"Q. Is it a glass?"

"Ans. Yes."

When a pitcher is shown him he calls it a "tipper"; a pen he calls "riglah"; a spittoon "sempen"; a hat "sem."

"Q. Do you call this (the hat) 'sem'?"

"Ans. No."

"Q. Is it a hat?"

"Ans. Yes."

"Q. What is this (showing him a match)?"

"Ans. Ses."

In order to demonstrate that he knows what it is, he makes the movement of striking a match. A book he calls "pok"; handkerchief, "sempence"; suspender also "sempence"; for pocketknife he gives the correct name; but when shown a bunch of keys, he also says "pocket-knife." After this he calls everything that is shown him "pocket"; for example, a watch and button.

When requested to repeat a word spoken to him he is unable to do so. He understands perfectly what he reads. He is handed a newspaper with an advertisement of an entertainment in the St. Louis Exposition Building. By putting a great variety of questions, some of them misleading, one becomes aware that he is familiar with the location of the building and the purposes for which it is built. He is asked to read an advertisement of a boxing match, the name of the prize fighter is pointed out to him and the inquiry is made, "What is he? Is he a preacher?" This causes him to laugh. In short, there is no flaw in his perceptive and reasoning powers as far as can be ascertained by a necessarily limited conversation, and as far as short acquaintance will allow. On being told to write, he holds the pen in an awkward manner and drops it repeatedly. He never has been much of a penman, but has been able to write simple letters. It is now utterly impossible for him to express his thoughts in writing, and even the most commonplace and everyday expression, when dictated, he fails to fix by letters.

An operation was agreed upon, a portion of the bone was trephined and when the dura mater was exposed it presented a dark cloudy appearance with all evidence of pulsation wanting. Upon raising the dura, a stream of dark, thick blood forced itself through the opening. With a dull-edged curette the greater part of the clot was removed and smaller portions subsequently taken away by means of saturation with a very fine sponge. The patient soon returned to consciousness, apparently none the worse for the operation. On the next day after the operation the patient was stupid and unable to speak, his condition being that of complete motor-aphasia. On the second day after the operation, in all efforts to speak he prefixed "shay" to words. He

could, however, answer "yes" and "no" correctly, "yes" having the "sh" sound very marked. A watch was pronounced "swat"; keys "shkeys"; half-dollar "shalf-dollar." On the third day, in answer to questions, he said that he "felt well" and that he "liked the hospital." He could speak words without the sibilant sound. On the fourth day all words were spoken correctly, and reply made to all questions with clear answers. Three months after the operation finds the patient hard at his daily tasks in a brickyard. He is now in his usual health, with all his faculties intact and a steady worker.

A few years ago the writer observed a case of aphasia, the patient being a girl about ten years of age who had been a very fluent talker until she met with an accident that caused the loss of speech. Ten days after the accident it was with the greatest difficulty that she could say two words. She understood perfectly what was said to her, but was unable to formulate her thoughts in words and sentences. The condition continued for some time, but the girl finally recovered her speech fully.

When the faculty of speech is normal it gives ability in verbal expression, aptness in the choice of words, and fluency of speech. An excess of this faculty is shown in verbosity, use of high-sounding words, and excessive talkativeness. When it is deficient there is lack of ability to express one's thoughts in words.

In conclusion we quote Dr. Gall's own words on the location, function and expression of this faculty which gave him an impulse to all of his wonderful discoveries:

In my ninth year my parents sent me to my uncle's, a curate, who, to inspire me with emulation, associated me with another boy who committed easily, while I was reproved for not learning lessons equally fast. Both were then sent to Baden, where, among thirty scholars, I always found it (speech) large in those who recited easily, though poor in composition. Two of these pupils surpassed even my former schoolmate in learning by heart, and both had such large, flaring eyes that they were nicknamed "saucer-eyes." Three years later, at Bruchsal, scholars with saucer eyes again mortified me by excelling me in learning by heart. Two years after, I went to Strasburg, where those who learned easiest by heart again had large, flaring eyes, yet in other respects were only indifferent scholars. I could not avoid the inference that eyes thus formed indicated an excellent verbal memory. I afterwards said to myself, if memory has its external mark, why should not each of the other faculties also have theirs? This gave the first impulse to my researches, and occasioned all my discoveries.

Persons largely endowed with verbal memory recite long passages, a great number of verses, an entire play, from having read it once or twice, and on all occasions quote classical authors. A man thus gifted was presented to Frederick II., and secreted behind a screen, heard

Voltaire read some of his new verses to the king, who said they were his own old verses copied, and, to prove it, called this man, who repeated them verbatim, to Voltaire's great provocation.

The reflective faculties are: Comparison, or judgment; Causality, or reason; and Mirth.

Comparison. This faculty gives the power of analysis, and is found strong in inductive philosophers, in combination with strong perceptive powers. This faculty was discovered and localized by Dr. Gall, who gives the following account of his discovery:

I often conversed with a philosopher endowed with great vivacity, who, when unable to prove his point by logic, had recourse to a comparison, by which he often threw his opponents off the track, which he could not do by arguments. As soon as I perceived that this was characteristic, I examined the form of his forehead, for I knew that an intellectual power would be located there rather than among the propensities; and observed in the external superior middle part of his frontal bone a great lengthened prominence, not before observed, commencing in the anterior superior middle part of his forehead, where it was about an inch broad, and contracting like a cone, reached its middle, where it touched educability. I then observed both whether those who followed this method in their discourses and writings had this organ, and whether those who had this organ pursued this method; and found all my observations to confirm my suppositions, and concluded that a connection exists between this development and discerning analogies and resemblances. Two Jesuits distinguished for their comparisons and parables, and Father Barhammer, who riveted his hearers by familiar comparisons, all had this middle anterior superior part of their foreheads developed into a conical eminence. All my observations only convinced me the more. Its possessors seize and judge well of the relations of things, etc., and are well fitted for business. Children in whom it is large prefer fables. We found it large in the famous preacher Jufnagel, and with lively joy saw it very large in Goethe; and this talent abounds in all his writings. It is most useful to poets, for with it everything becomes an image. St. Thomas Aquinas, the most profound, judicious, and clearest scholar of barbarous times, has this organ very visible in his bust.

Why should nature put this organ in the median line, where all of the most essential organs are always found? Because the education of the race commenced with these comparisons, which form ideas, images, and pictures. Even language becomes as it were personified, paints as well as impresses, and creates hieroglyphics, signs of objects, emblems, mythology, etc.

In speaking of the functions of this faculty Dr. Spurzheim says:

Its aim is to form abstract ideas, generalize, and establish harmony among the operations of the other faculties. Color compares colors

with each other, but comparison adapts them to the objects represented, rejecting lively colors to represent a gloomy scene. Tune compares tones, but comparison adapts the music to the existing occasion; censures dancing music in church; dislikes wearing fine clothes in the dirt, or seeing fine things besides common; feels inferior and superior relations; and prefers the superior, etc.

Lord Bacon is given credit for placing the sciences upon an inductive basis, but the study of human nature was not pursued inductively before the time of Dr. Gall's discoveries. When the importance of his work is thoroughly understood he will be looked upon as one of the world's greatest benefactors. Dr. Spurzheim rendered the world a great service in systematizing the discoveries of Gall and working out a philosophy of mind that is fundamental and helpful in all human activities. George Combe, who always spoke of his indebtedness to Dr. Spurzheim, wrote a book entitled, "The Constitution of Man, Considered in Relation to External Objects." Horace Mann, in his *Journal*, as recorded on page 105 of the "Life of Horace Mann," written by his wife, says:

Today I have had the pleasure of being introduced to George Combe, Esq., of Edinburgh, who has lately arrived in this country, the author of that extraordinary book, "The Constitution of Man," the doctrine of which I believe will work the same change in metaphysical science that Lord Bacon wrought in natural.

Without the discoveries of Gall, George Combe never could have written this masterpiece; hence the credit for founding the inductive science of mind belongs to Drs. Gall and Spurzheim, George Combe, and their associates. In speaking of the faculty of comparison George Combe says:

By common observers the metaphors, amplifications, allegories, and analogies supplied by comparison are frequently mistaken for the products of ideality, though they are very different. Ideality being a sentiment, when excited, infuses passion and enthusiasm into the mind, and prompts it to soar after the magnificent, and beautiful; while comparison, being an intellectual element, produces no vivid passion, no intense feeling or enthusiasm; but coolly and calmly plays off its corruscations derived from the other powers.

When comparison is excessively developed it gives a tendency to criticizing and fault-finding. One who has it in excess should always try to make his criticisms constructive, so as to help correct the conditions that are criticized. When there is a deficiency of this faculty there is lack of ability to

recognize resemblances in forms and ideas. This faculty can be cultivated through carefully observing and comparing things. When it is out of proportion with the rest it can be restrained by studying cause and effect relations more and giving less attention to the mere observation of phenomena.

Causality. This faculty deals with the most complex intellectual processes, and is used in studying cause and effect relations. It is the most important faculty in deductive reasoning, and is very strong in such philosophers as Socrates, Plato (who was nick-named the "broad-brow"), Immanuel Kant, Sir Isaac Newton, Benjamin Franklin, and others who have excelled in the study of the whys and the wherefores of things. This faculty was discovered and localized by Dr. Gall, and the following is an account of the organ given by the discoverer:

I had long observed that great philosophers had the anterior superior part of the forehead singularly large and prominent, as in Socrates, Democritus, Cicero, Bacon, Montaigne, Galileo, Leibnitz, Condillac, Diderot, Mendelssohn, etc.

But they differ; the domain of one kind being the material; of the other, the spiritual. One would know facts, the other conditions; one makes observation his basis, the other, disdaining the material world, rises into the spiritual, and contemplates mind, and investigates general principles. In these heads two cerebral parts are developed, one on each side, adjoining comparative sagacity; forming two segments of a sphere, placed on each side of the forehead, in a horizontal line. During our travels they gave us a cast moulded on the head of Kant, after death. It was with lively pleasure that we saw the extraordinary prominence of these identical parts. Fichte has it still more prominent. The ancients gave Jupiter these same prominences.

A third manifestation of this faculty is in "mother wit." In proportion as this anterior superior part of the forehead is developed the human mind is the more expanded, and the man raises himself above brutes and his fellows. This organization discovers the relations of causes and effects; pursues a long series of data; embraces a vast field of observation; discerns the unknown from the known, the constant from the accidental; deduces conclusions; ascends from effects to causes, and descends from general laws to facts; enriches nations with new truths, spreading like the beneficent rays of light; breaking the yoke of despotism, and destroying the machinations of imposture. It is reason which constitutes the true essence of man, and barrier of separation between man and brute.

The descriptions of these pioneers in observational psychology are very clear. They lived in an age when nearly all who gave any attention to the study of mind were metaphysicians; hence they were enabled to use their comparison and causality

in establishing these principles fundamentally. In speaking of causality Dr. Spurzheim says:

It seems to me that the special faculty of the cerebral parts on either side of comparison examines causes, considers the relations of cause and effect, and prompts men to ask "Why?" Its effects are immense; the cultivation of fields, invention of instruments, and whatever man produces by art, depend on this faculty. It is the fountain of resources; and produces results by applying causes. The laws of causation cannot be too much considered.

Causality and comparison combined constitute reason. Without causality, there can be no argumentative reasoning; without comparison, no comprehensive views, no nice distinctions. Observation teaches objects, and eventuality facts, while comparison points out their identity, analogy, difference, or harmony, whereas causality seeks their causes, and all together discern general principles and laws; draw conclusions, inductions, and creations; and constitute a truly philosophic understanding.

George Combe shows very clearly the action of causality when deficient, or when excessively developed, and states his ideas as follows:

One in whom it is deficient, in new circumstances, will be helpless and bewildered, where one in whom it is large will show his superiority by the extent of his inventions. A mechanic with causality small, will be at a stand if his ordinary tools are wanting, or if employed out of his ordinary line; while another having it large, will find a thousand substitutes. It is the fountain of all abstract ideas.

The excessive expression of causality is shown in theorizing and in speculating without sufficient observed data. When this power is deficient there is a shallowness of thought and reason. It can be cultivated by studying cause and effect relations, and can be restrained by giving more attention to observation and comparison and less to the whys and wherefores of things. Now that philosophy is based upon observation it is seldom necessary to restrain this faculty.

Mirth. This faculty gives an appreciation of wit and humor. It is situated between ideality and causality. Mirth was localized by Dr. Gall, who said, regarding its discovery:

In all persons I have examined, eminently endowed with this faculty, I have found the anterior superior lateral parts of the forehead considerably prominent in a segment of a sphere. It carries with it an irresistible propensity to ridicule everything, sparing neither friend nor foe, its possessors even launching their satire at themselves. Aristophanes was so bitter that he did not spare his own family, and ridiculed even Socrates. Henry IV. has been reproached for jesting and gaiety even in battle, and the untimely sallies of his lively mind. Diogenes amused

himself with all the follies of his age. Cicero had an extreme inclination to raillery, as had Horace and Juvenal; and this organ is large in all of them. There is no longer any doubt that this talent is indicated by this organism.

Dr. Spurzheim, in speaking of mirth, said :

Those who write like Voltaire, Rabelais, Piron, Sterne, Rabener, Wieland, and all who are fond of jest, raillery, ridicule, irony, and comical conceptions, have the upper and outer parts of the forehead immediately before ideality of considerable size.

George Combe treats the faculty at length in his work, and is given credit for the following :

I have found in the manifestations of those whose mirth predominates over causality a striking love for the purely ludicrous; their great delight being to heap absurd and incongruous ideas together; extract laughter out of every object; and enjoy the mirth their sallies created and therefore agree with Spurzheim that the sentiment of the ludicrous, is its primitive function.

The American writer of humor who best illustrates this faculty is Samuel L. Clemens (Mark Twain). His head is developed to a remarkable degree in the region where Gall localized mirth.

The abnormal expression of mirth is shown in clownishness, levity, and caricaturing of persons. When it is deficient there is a distaste for jokes, wit, and humor; and a serious expression of life. When excessive it can be restrained by devoting more time to serious and practical principles of science. If deficient it can be cultivated through the study of wit and humor.

CHAPTER X

THE PERFECTING POWERS

The Perfecting Powers are: Imitation; Adaptation; Construction; Ideality; and Sublimity.

Imitation. This faculty gives ability in imitating. It is located above adaptation and ideality. Imitation was localized by Dr. Gall, who describes his discovery of it as follows:

One of my friends assured me that the form of his own head was peculiar, and directed my hand to the anterior superior part of his head, which I found bulging, and behind on each side was a cavity descending towards the ear. He had a peculiar talent for imitating the gait, gestures, sounds of the voice, etc., so that the persons imitated were immediately recognized. I hastened to the deaf and dumb asylum to examine the head of Casteigner, who had fixed our attention from the first by his prodigious talent for mimicing perfectly the gait, gestures, etc., of the director, physician, surgeon, women, etc., which amused the more, as his education had been absolutely neglected. To my great astonishment I found this organ as prominent as in my friend. I sought opportunities for multiplying my observations, visited families and schools, examined those noted for this talent; found it the larger or smaller as persons were more or less gifted in mimicry; procured the skull of Junger the poet and comedian; found it large in a thief who had belonged to a strolling company of actors; and have so greatly multiplied observations that I feel justified in maintaining that the talent for personifying others is a fundamental faculty, and has its particular organ. It undoubtedly aids the poet, especially dramatic. It is of great use in oratory, by giving appropriate gestures, and especially in painters and artists. Some simpletons and madmen have astonishing powers of mimicry, and most great actors were bred to other avocations, but were irresistibly drawn to acting.

George Combe speaks of a remarkable case that came under his observation, as follows:

A lady in whom it is large has a strong tendency to imitate every sound she hears, crows when she hears the cock crow; and one day while reading, when the growl of distant thunder reached her ear, she unconsciously imitated it. It represents all the other faculties, and gives power of expression.

James P. Browne, M. D., the anatomist and psychologist, in speaking of this faculty, on page 367 of his book, "Phrenology

and its Application to Education, Insanity and Prison Discipline," says:

Writers on mental philosophy have admitted the existence of a special faculty of imitation, and dwelt upon its importance, but some have supposed its sphere of action to be much more comprehensive than a closer observation of facts would justify. They seemed to imagine that upon this faculty depended the power of acquiring knowledge. A little reflection, however, will show such an opinion to be erroneous. The kinds of knowledge are various, and so are the capacities of individuals. Experience also teaches that it is not those who are endowed with the strongest imitative powers that excel in the acquisition of knowledge. And it is notorious that many who have been remarkable for quickness of apprehension were by no means noted for powers of imitation. The imitative faculties of the monkey, the parrot, and the mocking-bird do not enable them to acquire knowledge. Neither can the mimic, however extraordinary his powers of imitation, be at all considered on that account proportionably superior to others in intellectual ability. Successful actors display more marked imitative talents than men in other professions, but yet we do not, therefore, find them excelling others who have but little capacity for imitation, in literature and the sciences. The late Charles Mathews was an exceedingly clever man, with rare talent for discerning, with uncommon accuracy, the peculiar manner of individuals, and a power of mimicry almost unrivaled, and yet he could not write such "valuable nonsense" as his friend, James Smith, one of the authors of the "Rejected Addresses." Nor could even Shakespeare himself personify his own "Hamlet" with so much truthfulness and power as did Garrick and Kemble.

But although imitation is, in accordance with a general law, incompetent to perform the functions of other powers, it may rightly be deemed an efficient auxiliary in exciting them to action. It tends to fix the attention of the intellectual faculties with the view of obtaining materials for its own gratification. Hence its importance in early life, when the germs of our future conduct and acquirements are planted on the tender and susceptible brain of infancy. How admirable, therefore, is that provision of nature which has caused this to be one of the first faculties manifested in childhood! But in proportion to the advantages arising from the early development of this faculty would be the mischief of subjecting children to the contaminating influence of bad example. It must not be forgotten, however, that the effect of example is necessarily modified by the predominance of certain sentiments and feelings; for an individual possessed of much imitative power, who is also endowed with high moral sentiments, will be far less warped by bad example from the path of rectitude than one whose moral sense is not so active, although the latter may be but scantily endowed with the faculty of imitation.

The excessive action is shown in lack of originality and in the servile imitation of others. When it is deficient there is inability to imitate, and a tendency to unconventionality. It can be cultivated through continued efforts in imitating others,

and when it is too strong can be restrained through greater effort to be original and to put individuality into one's work.

Adaptation. This faculty gives affability, politeness, blandness, persuasiveness, pleasantness, agreeableness and good manners. Through it there is an adaptation to people, situations or conditions. It was localized by O. S. and L. N. Fowler, and is situated above causality and mirth. When it is abnormally strong it causes affectation, palaver, gush, and an undesirable form of suavity. When it is deficient it causes bluntness and disagreeableness. Persons who have so much adaptation that it is shown in affectation and palaver fail to impress others as they could, and should make an effort to restrain this tendency through reason. In order to cultivate it when it is deficient an effort should be made to be more adaptable and agreeable, thus developing a more normal expression.

Construction. This faculty gives ability to plan and construct in mechanism, art, literature, commerce, etc. Construction was localized by Dr. Gall. It is situated in front of acquisitiveness and above tune and the speech center. It is well developed in Edison, Marconi, Tesla, and other great inventors. Dr. Gall makes the following comments on this faculty:

It is about half covered by the very considerably developed convolutions of the middle lobes. It is placed sometimes a little higher, or a little lower, according as the neighboring organs are more or less developed, and lies immediately behind tune, and above number. An unpractised eye might easily confound it with acquisitiveness, which is lengthened from behind forward, and when very large extends to the external edge of the superciliary ridge. When construction is large it gives the temples a prominence equal to that of the zygomatic region; so that great mechanicians have heads apparently enclosed between two parallel planes. In very distinguished artists this region is extremely prominent, and appears like a cushion, which engravers, painters, and sculptors regard as a deformity, and therefore never express in its whole development. The deficiency of the organs in the anterior lateral part of the forehead sometimes leaves the temples of great mechanicians less prominent than their zygomatic region.

At Vienna, and in the whole course of our travels, we found this organ developed among all artists, draftsmen, and mechanicians in proportion to their talents.

In the following statement Dr. Spurzheim calls attention to the fact that this faculty is expressed in the lower animals as well as in human beings:

In animals ability to construct is not in proportion to their understanding. The beaver, with less intellect than the dog, surpasses him

in construction. The skulls of animals which build and burrow, have this organ much larger than those which do not. The beaver, marmot and hamster have it distinctly expressed. By it birds build nests, rabbits burrow, beavers build huts, and man hovels, palaces, temples, ships, engines of war, clothes, toys, and instruments of all kinds. It gives manual nicety, as in drawing, engraving, writing, carving, sculpture, and tool using generally. Many men of great intellectual endowments can never acquire manual dexterity.

Construction is one of the elementary powers of mind that has been most influential in bringing about the numerous changes from the most primitive life of humanity down to the complex conditions that prevail today. Inventions are largely the result of this faculty. When it is excessively developed it causes a mania for impractical inventions. A deficiency is manifested in lack of ability to construct things. To cultivate it when deficient the individual should use it in planning, designing, or constructing things. To restrain it when excessively developed the perceptive powers should be cultivated in order to give more practical tendencies to the mind.

Ideality. This faculty gives a love for, and appreciation of, the beautiful in art and nature. It is situated above construction. It was localized by Dr. Gall. This is the leading faculty in the creative imagination, but is supported by sublimity, construction, and some of the other mental powers. It was unusually strong in Edgar Allen Poe, who had the reputation of possessing one of the strongest imaginations known to history. It is strong in Paderewski and other eminent musicians. When the sensory organs predominate over the motor and nutritive this faculty is more likely to be a strong characteristic of the mind. When Dr. Gall first discovered it he treated it in combination with sublimity, as one of the primary elements of the mind. Dr. Spurzheim believed that the brain centers devoted to ideality had some additional function. Dr. Gall says of ideality:

Its ample development causes a prominence on each side of the head, commencing about half the height of the forehead, above the temples, extending obliquely from below upwards, and from before backwards, about two inches; giving so singular a form to this part of the head, that painters and sculptors rarely present them fully. The poets of all ages have this organ large, as in Pindar, Euripides, Sophocles, Heraclides, Plautus, Terence, Virgil, Tibullus, Ovid, Juvenal, Horace, Boccaccio, Aristo, Aretin, Tasso, Milton, Boileau, Rousseau, Pope, Young, Gresset, Voltaire, Gesner, Klopstock, Wieland, Andrieux, Lemerrier, Dupaty, etc.

Homer's head shows two extraordinary prominences in its superior

lateral parts, which must strike all. Why should "the father of poetry" have this form?

The first poet whose form of head struck me, was one of my friends, ordinary in other respects, who often composed verses extempore. His forehead, immediately above the nose, rose perpendicularly, then retreated, and extended itself much laterally, as if a portion had been super-added to each side. I remembered having observed the same form of head in the bust of Ovid. Though all poets had not this form of forehead, yet all had these lateral prominences. Nicolai, of Berlin, invited Spurzheim and myself to see his collection of thirty busts of poets, in all of whom this region was more or less prominent, according to the talents of each. All subsequent observations confirm this organ. There never has existed, or will exist, a poet without this development large.

Gall, Spurzheim and Combe studied so fundamentally in establishing the inductive study of mind that the truths contained in their works are worthy of the most careful study today. The fact that one of the leading publishing houses of America republished the works of Spurzheim, without any revision, in 1908, after they had been out of print for more than half a century, is a strong endorsement of the fundamental work done by this worthy pioneer. In speaking of the faculty of ideality Dr. Spurzheim says:

A poetic turn of mind results from a peculiar mode of feeling. Vividness, glow, exaltation, imagination, inspiration, rapture, exaggeration, and warmth of expression, are requisite for poetry. Poets depict a fictitious and imaginary world. This faculty gives glow to the other faculties; impresses the poetical and ideal; aspires to imaginary perfection in everything; creates enthusiasm in friendship, virtue, painting, music, etc.; produces sentimentality, and leads to delicacy and susceptibility. It often acts with spirituality, located adjoining it, in embellishing poetry with the mysterious and supernatural. Practical exaltation varies with this organ.

George Combe makes the following comments on ideality:

We owe to Dr. Spurzheim the correct analysis of this faculty, and the elegant and appropriate name by which it is designated. "It is impossible," says he, "that poetry in general should be confined to one single organ; and I therefore think that the name (organ of poetry) used by Dr. Gall, does not indicate the essential faculty. In every kind of poetry, the sentiments are exalted, the expressions warm; and there must be rapture, inspiration, what is commonly called imagination or fancy."

There has been a general agreement among the disciples of these pioneers regarding the location and function of ideality,

but there has been some difference of opinion about the terminology. O. S. Fowler, in "Human Science," page 952, says:

Poetry, the first name given by Gall to this faculty, is correct, for it constitutes the soul of poetry, but is too restricted, for it is quite as constituent a part of oratory and of painting. Spurzheim's name, ideality, is also too limited, as referring to only the imaginary and fanciful. Its primal office is love of beauty, in nature, poetry, eloquence, conversation, manners, art, music, mechanics, flowers, and wherever found. I have therefore changed its name to beauty.

This discussion of terminology shows one of the difficulties that has confronted the various schools of psychology for a century, and that keeps the followers of the various schools from uniting in forming the true science of mind that should be a guide to everybody in the study and use of psychological principles. The numerous terminologies in existence at the present time are doing more to perpetuate the different schools and sects of psychology than any other one thing. It is high time that representatives of the various schools were coming together to formulate a terminology that might be used and understood by all.

When ideality is excessively developed it gives a tendency to fastidiousness, ultra refinement, and over-ornamentation. When it is deficient there is lack of ability to see and appreciate the beauties of art and nature. It should then be cultivated by getting into an environment that will call it into action. When it is excessively developed it should be restrained by giving more attention to the practical and utilitarian and less to the ideal.

Sublimity. This faculty gives an appreciation of the grand, sublime, romantic and infinite. As already stated, it was treated as a part of ideality by Dr. Gall, and was first believed to be an independent faculty of the mind by Dr. Spurzheim. George Combe also felt the necessity for dividing ideality, as originally localized by Dr. Gall, and seems to have been the first to suggest the name of sublimity, as will be noted from the following quotation, from page 399 of his "System of Phrenology," published in 1836:

In some individuals the front part of this organ is most developed, in others the back part; and from cases which I have observed, there is reason to believe that the latter is a separate organ. The back part is left without a number on the bust, and a mark of interrogation is inscribed on it, to denote that the function is a subject of inquiry. The back part touches caution; and I suspect that excitement of this organ,

in a moderate degree, is an ingredient in the emotion of the sublime. The roar of thunder, or of a cataract—the beetling cliff suspended high in air, and threatening to cause ruin by its fall—impress the mind with feelings of terror; and it is only such objects that produce the sentiment of sublimity. It would be interesting to take two individuals with equal ideality, but the one possessed of much and the other of little caution, to the vale of Glencoe, the pass of Borrowdale, the cave of Staffa, or some other scene in which the elements of the sublime predominate, and to mark their different emotions. I suspect that the large caution would give the more profound and intense emotions of sublimity.

This separation of sublimity from the organ of ideality, and its treatment as an independent faculty, is now generally recognized. This change did not indicate any disagreement regarding the localization, but enables psychologists to give a more minute and accurate description of mental phenomena.

Sublimity is located above acquisitiveness, and behind ideality. When it is abnormally strong it causes people to use their adjectives in the superlative degree more than they should, and is the reason for unconscious exaggeration. When it is very deficient there is a lack of ability to appreciate the grand and sublime. When it is excessively developed everything that tends to arouse it should be avoided. When it is deficient it should be cultivated by studying the sublime, the romantic, and the grand.

CHAPTER XI

SOCIAL AND DOMESTIC AFFECTIONS

The Social and Domestic Affections are: Parental Love; Love of Home; Friendship; Conjugal Love; and Amativeness.

All the relationships of home and society are connected with these mental powers that function through the occipital lobe of the brain and through the cerebellum. When they are normally expressed the result is harmony between husband and wife, parents and children, members of communities and citizens of the various countries throughout the world.

Parental Love. This instinct causes a love for children, and it gives children a love for parents. It was first localized by Dr. Gall. It is strong in many people who have no children of their own, but who gratify it by adopting children or by devoting their lives to vocations that enable them to give helpful service to children. When it is abnormally strong it gives a tendency to be over-indulgent to children, resulting in pampered and spoiled characters. Persons in whom this instinct is deficient are impatient and sometimes even cruel with children, so that they neglect them or make their lives miserable. When it is deficient a determined effort should be made to cultivate it by being kinder and more indulgent with children. When it is excessively developed it should be restrained through reason, by doing for children the things that will result in the greatest good. This power is located in the most pronounced region of the back-head, immediately below love of home.

Love of Home. This impulse, desire or affection, is responsible for the strong tendency shown in many people to settle down in one place called home, and causes home-sickness when such individuals are separated from home for any length of time. It inspired the poet to write: "Home, Sweet Home; There Is No Place Like Home," and "How Dear To My Heart Are The Scenes Of My Childhood, When Fond Recollection Presents Them to View." This affection was local-

ized by Dr. Spurzheim. Deficient love of home, combined with strong perceptive powers, gives a great desire for travel, where one can always see new sights and explore new realms of nature. When this affection is abnormally strong and the perceptive powers are deficient there is a disposition to center one's thoughts upon home, so that a lifetime may be spent in contentment without getting far away from the old homestead. To cultivate it, remain at home and enjoy its associations and environments. A medium expression of this power is beneficial to the individual because travel broadens the mind and gives a variety of helpful experiences that cannot be gained without it.

Friendship. This is the affection that gives a desire to associate with other people, regardless of other relationships. It is the instinct that urges individuals on to organize clubs, societies, fraternities, and other similar organizations. This affection was localized by Dr. Gall. The excessive action is shown in indiscriminate social attachments. When it is deficient there is a tendency to prefer solitude to society, and to live the hermit life. It is not difficult to notice all degrees of development by observing different members of society who are all practically placed in the same environment but who do not respond to it equally because of their differences in development of this social affection. Where there is a deficiency of friendship there is usually also a lack of self-reliance and aggressiveness, and an excessive development of reserve, timidity, and the self-consciousness that causes sensitiveness to the criticisms of others, but there may be a lack of sociability due to the deficiency of friendship only. When this instinct is excessively developed and there is an excess of love of approbation and of benevolence there is danger that the individual will go to extremes in entertaining friends and may sometimes overreach in money matters until he commits the crime of forgery or embezzlement in order to secure the money to gratify the abnormal expression of these powers. When friendship is deficient it can be cultivated by forcing oneself to mingle with people more than is natural.

Conjugal Love (or, the Mating Instinct). This instinct, or affection, causes constancy in wedlock. It is not only found in human beings, but is strong in some of the lower animals that mate for life and are faithful to each other. This instinct was localized by J. Vimont, M. D., the eminent psy-

chologist of Paris. It is located below friendship, above amateness, and on either side of parental love. When it is abnormally strong it causes such strong attachments in wedlock that after living together happily for years if the life-mate dies this affection causes such grief and mourning that the charms of life are gone and in some instances death soon ensues. When the mating instinct is deficient it is one of the chief causes for inconstancy in wedlock, which is so common even in our twentieth century civilization. Like all other powers, conjugal love can be either cultivated or restrained through reason, conscience, and will power. The sad scenes in the divorce courts throughout the civilized world are evidence that there is not as much domestic happiness as there should be. When the profession of home making is taken as seriously as it should be the mating instinct will not as often be wounded as under prevailing conditions. In describing this propensity James P. Browne, M. D., author of "Phrenology and its Application to Education, Insanity and Prison Discipline," says, on page 25 of his book:

When it was ordained that a man should forsake father and mother and cling to his wife, who was but a little while previously a stranger to him, there was implanted within him a propensity powerful enough to draw the affections into channels differing from those through which they were from early infancy accustomed to flow; but still without causing a lessening of love for the familiar objects of old, affectionate, and reverential attachments. This instinct forms the principal ingredient of the mixed passion called Love. It renders man, in an especial manner, susceptible of the influence of the beauty and grace so liberally bestowed on the fairest portion of humanity. It is this feeling, when acting in harmony with predominating benevolence, warm attachment, respectfulness, and conscientiousness, heightened by a good endowment of ideality, or the sense of the beautiful, that imparts so much enthusiasm and unselfish devotedness to the loves of the sexes, and spreads such enduring charms over the domestic fireside. And these sentiments, when chastened by the presence of pure religious aspirations, render mankind ready, instinctively, and voluntarily, to entwine themselves for life within the bonds of wedlock. Happy are they in this state of union whose dispositions harmonize with one another; but bitter woe is often the lot of those high-minded persons who are bound for life to consort with the ill-disposed and the selfish.

Amateness. This instinct is located in the cerebellum, and is the only instinct which functions through this division of the brain; and consequently it is the only instinct which is not located in the cerebrum, or upper brain. Amateness was localized by Dr. Gall. Its expressions have been so well

described by Nelson Sizer in his book, "Heads and Faces," page 56, that we quote from it as follows:

This organ is located in the cerebellum, or little brain, and when large gives breadth and fullness to the base of the skull at the nape of the neck. It produces physical love between the sexes as such. Its primary office is the continuance of the race. It leads by a law of nature each sex to treat the other with kindness and courtesy. Before this propensity comes into activity, girls and boys may disagree with each other, but not so readily as girls would disagree with girls, or boys with boys. But when that time of life comes that this faculty awakens to activity, nature dictates forbearance, courtesy, and kindness between the sexes. Each comes to regard the other with special favor, and is anxious to be loved by the other, and this organ, though physical and animal in its tendency, inspires efforts in the direction of respectability, worth, and refinement. The rustic boor, who knows scarcely the first laws in gentlemanly bearing, becomes transformed, in feeling at least, when his love element finds its object, and his manners are changed by the awakening of the intellect and the elements of taste, and pride, and nobility, that enables him to assume a bearing which is surprising; the drift and scope and aim of his life seem to be changed.

The shy and awkward girl also, as her womanly nature awakens, manifests life on a new model; her voice has in it more of richness and music than before; her eye acquires a new lustre; her walk becomes elastic, if not always graceful, and every motion is comparatively attractive and winning.

A young man sometimes floats carelessly along the stream of life regardless of time, money, or reputation, until some fair being, his natural counterpart, awakens in him newness of life; he is then altogether changed in purpose and effort, he begins to covet respectability and refinement; saves his time and husband's his means and seeks a position of manly independence. In every well constituted and unpervverted mind this result will in a greater or less degree occur.

If we study the influence of this passion upon the lower animals we find that the male will not fight with the female or manifest cruelty toward her; in this case we know of no exception. We are sorry to say that among human beings cursed with intoxicating drinks and other artificial influences, fierce quarrels between men and women and sometimes murders occur; but these grow out of morbid conditions, and not unfrequently out of special abnormal action of the love element itself, and that which ought to become an attraction between them becomes a source of discontent and disagreement. Jealousy is more often based on the undue activity of this faculty than on any other. The office of this propensity is to propagate the species, and though it is the basis of physical attraction between the sexes, it does not necessarily induce that institution called marriage, as marriage is not necessary to the continuance of the species, that depending upon another faculty—conjugal love.

When there is a perversion of the normal expression of this power, or when the power is abnormally strong, it should be controlled and restrained through the exercise of the intellec-

tual and moral powers, and will power. The normal expression of this power is for good—and for no less a purpose than the perpetuation of the race. The abuse of this power, and its abnormal expression, is the cause of much of the misery, suffering and crime in the world today.

CHAPTER XII

THE ASPIRING AND GOVERNING POWERS

The Aspiring and Governing Powers are: Continuity; Self-Reliance; Firmness; Self-Consciousness; (?) Ambition; and Caution.

Continuity (or Concentration). This power gives continuity of effort, application, unity, consecutiveness, connectedness, desire to do one thing at a time, and to finish it before beginning anything else. It is located above love of home. Dr. Gall does not mention this power. Dr. Spurzheim and George Combe had a controversy over this faculty, Spurzheim being disposed to include it as a part of love of home, while George Combe believed that the facts observed justified him in considering concentration as one of the primary elements of mind, and the followers of this school of psychology have generally accepted Combe's discovery. About the time of the controversy between Spurzheim and Combe, Dr. Solly, of England, demonstrated in a prepared brain the association fibres connecting the different regions of the brain, thus showing how concentration is connected with all other parts of the brain through these association fibres. In speaking of this faculty George Combe said:

Some can detain their feelings and ideas a long time, giving them the quality of continuity; while others experience great difficulty in detaining so as to examine and compare them, and hence cannot take systematic views of things, for want of concentrating their powers on one point. I find this organ large in the former, but small in the latter. Some in conversing naturally fall into a connected train of thinking till they have placed it clearly before the listener's mind; in such this organ is uniformly large. Others shift from topic to topic, regardless of their natural connection, leaving no distinct impression; in such this organ is small. A lady first suggested this idea. It gives continuity to feelings and ideas. The power to give continuity to emotion and intellectual conception was a striking feature in the minds of the late John Kemble and Mrs. Siddons. During long and solemn pauses in their declamation, their audience saw the mental state prolonged over the whole interval, which added to the depth and intensity of the effect.

The Editor of the Phrenological Journal makes the following comments on this faculty:

We occasionally find persons with large reflective organs who are little given to sustained reasoning. Their intellectual perceptions are strong and rapid, and momentarily brilliant, but the energy ceases as soon as its impression is felt by the auditor, but never prolonged. They come to their conclusions at a bound, not by ratiocination. Whatever can be seen at a glance or two, they perceive, and often with much perspicacity and originality, but they fail in whatever requires the investigation of abstract principles or logical deductions. They are better orators than writers, and in conversation than either. Perhaps they argue well in controversy, because the successive replies of debate break the reasoning into steps, and always present some new point for immediate judgment, all consequent on a deficiency of this faculty. Others, with rather poor intellects, are great dabblers in argument, and perpetually skirmishing and hair-splitting on their favorite opinions. Such have it large.

When large, and joined with large causality, the power and philosophy of reasoning appears in its greatest perfection. The mind possesses large intellectual resources, and makes the most of them by collecting its conceptions into a strong mental picture, and conveying them with the full force of a sustained presentation. This intellectual picture is enlarged in its dimensions; more completely filled up with related conceptions; has its lines more strongly drawn; and there is a more comprehensive view of its multiplied connections.

The excessive action of this power is shown in wearisome reiterations, and a tendency to give unessential and tiresome details. When it is deficient there is a desire for constant change, lack of concentration, and a tendency to become interested in too many different things. When excessive it should be restrained by giving less attention to the minute details of one thing and using practical illustrations; when deficient it can be cultivated by making an effort to concentrate the mind upon one thing and giving all the attention to it until it is thoroughly completed.

Self-Reliance. This faculty is located above concentration, and gives the sense of independence, love of liberty and power, superiority, leadership, and authority. Gall discovered this organ in a young man of fair address, who said he had always been too proud to condescend to engage in business either to preserve his paternal fortune or to acquire a new one, and that this excessive pride had caused all his misery. Drs. Gall and Spurzheim differed in their deductions about this organ, just as Spurzheim and Combe did about concentration and love of home. The discovery of concentration by George Combe removed the cause of controversy between Drs. Gall and

Spurzheim, and explained the correct function of three of the primary elements of the mind, instead of attributing the work of these three to the two faculties that Gall and Spurzheim discovered. It is not often that the functions of self-reliance, continuity and love of home are confused, but there are many people who confuse the functions of self-reliance and self-consciousness. The difference between them is clearly given by Dr. Gall, as follows:

The proud man is imbued with a sense of his own superior merit, and from the summit of his grandeur treats all other mortals with indifference or contempt; while the vain man attaches the utmost importance to the opinions entertained of him by others, and eagerly seeks their approbation. The proud man expects others to come to him and find out his merits; while the vain man knocks at every door to attract attention and supplicates for trifling honors. The proud man despises those marks of distinction which confer the utmost delight on the vain. The proud man is disgusted with indiscreet eulogiums; while the vain man inhales with ecstasy the incense of flattery, however awkwardly offered. The proud man never stoops, even in urgent necessities; the vain, to gain praise, will humble himself, even to crawling. Pride and thirst for dominion exist in few, whilst vanity and self-love are universal. Pride and vanity are very different fundamental qualities, so that we must admit a primitive organ for each.

A prince in Vienna, remarkable for his ridiculous pride, stiff gait, and always quoting his ancestors, was bald, and had this same conformation I had noticed in the mendicant. Every one will find proofs that this sentiment was innate in their proud and haughty acquaintances.

When self-reliance is excessively developed it manifests in pride, arrogance, presumption, tyranny, haughtiness, egotism and disdain. When it is deficient there is servility and slavish humility. A person who has a lack of balance between self-reliance, self-consciousness, and the other powers of mind, is likely to be a slave to his superiors and a despot over his inferiors. In case of insanity persons with excessive self-reliance imagine themselves to be some of the great rulers of the world, and even the Supreme Being. To restrain self-reliance when it is excessively developed the individual must force himself to give more consideration to the judgment of others than is natural to him. To cultivate it when it is deficient it is necessary to take every opportunity to assume responsibility in public life. Oral English, public speaking, debating, salesmanship, and other similar activities cultivate self-reliance. The sheltered life restrains it.

Firmness. This faculty gives determination, persistence, perseverance, resolution, steadfastness, stability. It is located

in front of self-reliance. Firmness was localized by Dr. Gall, who said of it:

This organ is formed by convolutions placed immediately on the top of the head, under the two superior anterior angles of the parietal bones, at the point where they meet the superior posterior edges of the frontal. When they are large they give to the crown of the head a spherical prominence, which is pronounced in firm persons, but level or depressed in the feeble and irresolute.

Dr. James P. Browne, the anatomist and psychologist, in treating firmness in his book, says:

The most careless observer of human conduct cannot fail to notice in some individuals a marked tenacity of purpose of which others are comparatively destitute. The affection from which springs this mental peculiarity is called firmness. Its prevalence, under rational and moral restrictions, is of great importance both in private and in public life. Nations composed of men, who happen to be, in the main, amply endowed with this power, are remarkable for steadfastness and untiring perseverance in pursuit of whatever they may, collectively, deem of importance to the welfare of the people at large. But when once they have obtained the object of their wishes, nothing but the most overwhelming compulsion could force them to attempt the undoing of that which cost them such sacrifices to establish, and of the beneficial efficacy of which they still continue to entertain sanguine expectations. In politics, therefore, this faculty is of the utmost value. A people, in whose mental constitution firmness is found to be a characteristic ingredient, are not likely to be driven about by every "wind of doctrine." They may be sensible of the existence of blemishes which disfigure the fair features of the constitution; they may long for the fulfillment of those theoretic visions of political purity and happiness, which would be the result of the active predominance of the moral sentiments, but which they know can never be realized, while selfishness continues to sway the motives of most of those men, whose talents, energies, and industry enable them to form the channels through which the current of popular opinions is accustomed to flow. They may be aware of these imperfections, but so long as firmness shall characterize a nation, the majority will lend an unwilling ear to the blandishments of eloquence, should that most influential offspring of the highest mental powers, harmoniously combined, be used for the purpose of effecting a sudden uprooting of long established institutions. Of course, caution and reflection, as well as veneration for old institutions, must also be national characteristics. But to support these firmness is essential.

Excessive action of firmness is manifested in obstinacy, stubbornness, and wilfulness. A deficiency is manifested in irresolution, instability, and lack of a decided opinion. The excessive action of firmness is noticeable in juvenile delinquents, and this power is so often suppressed in children that their lives are made miserable. To restrain it the individual

should be appealed to through the intellect rather than by force. To cultivate it an effort should be made to develop more decided opinions and then to stay with them regardless of the opposition that they meet.

Self-Consciousness. This faculty gives the sense of regard for character and appearance, love of praise, fame, glory, commendation, popularity, display, and social position. It is located on either side of self-reliance. This faculty is usually known as love of approbation. It appears to have two or three functions that are so distinct that they should really be divided into individual powers. One of these is ambition; another is self-consciousness. In the practical work of character analysis it is often difficult to explain the characteristics that are classed under this faculty without speaking of distinct mental powers. This faculty was localized by Dr. Gall. After describing fully the situation of self-consciousness Dr. Gall says:

My observations, made since its discovery, in hospitals for the insane and society at large, fully establish this as its form and seat. They took us once to a patient whom they thought mad from pride, but his loquacity, costume, and gestures proved that he was mad from vanity, not pride, and we found in him a strong development of vanity and not of pride. I once examined with Esquirol, at the Salpetriere, the head of a woman who believed herself queen of France. It had precisely these same developments, which I found at Vienna, on the head of the maniac mentioned elsewhere, who also believed herself queen of France.

Apes have often astonished me. All know how passionately fond they are of dress, as well as sensitive to mockery and ridicule. Those not decidedly vicious, like baboons and apes whose heads are flat, but are like ourang-outangs and monkeys (with a considerable prominence of forehead), I advance boldly to and caress; and they ordinarily receive me with the utmost mildness, and utter sounds of joy, tenderly embracing and kissing me. But if they perceive one mocking them, or unable to conceal a smile, they show their teeth, leap upon him, and bite and slap him with admirable agility; and they have the organ of vanity very distinctly shaped, like two segments of a sphere.

Vanity, ambition, love of glory, are modifications of the same fundamental quality. Woman shows it in dress, statesmen in love of office, and soldiers in defending their country. It is as common as beneficial to individuals and society; for it is one of the most powerful, laudable, and disinterested motives to action. How many brilliant deeds, instances of generous devotion, and admirable exertions does it inspire? Parents and instructors can employ no more efficient incentives to good deeds than this; and what recompense can be more flattering to the generous, noble-hearted man than public marks of distinction and merit celebrity, and a wide and brilliant reputation?

For my part, I like ambition and a sense of honor in my shoemaker, for it induces him to make me good shoes; and in my gardener, for it

gives me the very nicest fruits. I want no advocate, physician, general, or minister who is not anxious for glory, and cares only for gold. I like the native vanity of that young girl; it will some day inspire her with ambition to become an excellent wife and mother. Rectify this pretended weakness, and society will always be the better for it than for the apathy and indifference of those philosophers who pretend to despise it.

I thank nature for giving all more or less of it. Rigid justice rarely appreciates good qualities; but the divine enchantress, Vanity, consoles us for our own defects, and the advantages of others over us, in some self-compensations which we prefer to everything else. Where is the man who, all things considered, would exchange with another?

Vanity is the same in forests, villages, and cities. It makes the most uncivilized nations believe themselves superior to the rest of mankind; considering their condition the climax of human felicity, and model of perfection, and esteeming others according as they approach their standard. One is vain of some of its members, another of its wealth, population, antiquity, and power; while those who have nothing else, boast of their ignorance, simplicity, mountains, forests, slavery, poverty, or the absolute despotism of their tyrants.

A thousand artificial wants spring from it to embellish our dwellings, support our industries, and create the conveniences of life. To this, chiefly, we are indebted for the flourishing state of the arts and sciences, sculpture, painting, natural history, public gardens, libraries, monuments, palaces, and temples, which, but for emulation, would be pitiable. So far from being a source of national corruption and ruin, it becomes the mainspring of the arts and sciences; the soul of commerce; the chief agent of national grandeur and opulence, and great incentive to charities, public and private.

Brutes, too, love approbation. How caresses delight dogs! How sensitive are horses to marks of appreciation, and how emulous not to be passed! Where, as in Southern France, they decorate smart mules with bouquets, their most painful punishment consists in depriving them of this token. My female ape, whenever they give her a handkerchief, throws it over her, and takes wonderful pleasure in dragging it behind her, like the train of a court robe. My female dog is never happier than when charged with carrying my slippers, when she bridles up and wriggles, and is the more animated the more I say "fine, Stella," but suddenly became and remained sullen for two years, from jealousy of a squirrel, yet resumed her gaiety the day it died. Birds are equally delighted by praise.

Dr. Spurzheim says of this faculty:

It makes us attentive to the opinions entertained of us, and creates the inquiry, "What will people say?" It is fond of approbation in general without regard to the manner of acquiring it; and may be directed to objects good, indifferent, or hurtful. Its sphere of activity is very extensive, for it is sensitive to caresses, flattery, compliments, applause, and glory, and men endowed with it use many devices to attract attention. They dress fashionably, and resort to show, decorations, titles, &c. Ambition is its goal in great objects, and vanity in trifles. The victorious general is elated with the applause of his countrymen, and the slave delighted by his master's approval. Combined with the propensities,

it glories in being the greatest eater, drinker, and fighter. Some will do everything to gain notoriety. It is one of the most powerful motives in society. It creates politeness, yet makes us slaves of fashion, and is the mortal enemy of personal liberty. The number of those who seek distinction for talents and virtue is small.

Its great development elongates the posterior, upper, and lateral part of the head, yet sometimes spreads out on either side, which widens instead of elongating the head.

In speaking of this faculty of self-consciousness George Combe said:

Its due endowment is indispensable to an amiable character. It produces agreeableness to others; is the drill-sergeant of society; suppresses numberless manifestations of selfishness, lest we should give offence; and is the butt on which wit strikes to obviate our follies. To be laughed at is worse than death to those in whom it is large. No faculty is more prone to excess. It pays unmeaning compliments which most persons like when bestowed on themselves, but ridicule in others. It renders the school-girl miserable if her dress and style of living are inferior, and torments the lady if her apparel and equipage are surpassed by her rivals. It makes the individual talk of himself, his affairs, and connections, so as to convey vast ideas of his own greatness or goodness.

Those in whom it is deficient are strangers to ceremony, and indifferent to censure, and are unaffected by indignities and rebuffs, constituting what are termed "impracticables."

When powerful it carries the head backward, and a little to one side, softens the tones, and puts smiles into the countenance.

The excessive action of self-consciousness, or love of approbation, is in rivalry, excessive sensitiveness to the criticisms of people, vanity, pomposity, abnormal desire for praise, and jealousy. A deficiency is shown in indifference to the opinions of others. The excessive action of self-consciousness causes great discomfort to its possessor, and a determined effort should be made to restrain it through intellect. When necessary it can be cultivated by giving more consideration to the opinion of others.

One of the first motives to be used with children is the love of approbation. Dr. Samuel G. Howe, the teacher of Laura Bridgman, reported that during the first year of her development with him, she would playfully make mistakes with one hand and strike it with the other, and often pat herself on the head when she performed work correctly, which was the sign of approbation. When we think of how almost utterly incapable of thought she was at the beginning of the year and what obstacles she had to overcome to gain any ideas we may

see how early in a child's development this stimulus takes a fixed position among the mental forces.

Ambition (??). Some of the later students of human nature have deemed it improbable that there could be two tendencies so different in their expression as self-consciousness and ambition manifesting through the same brain center. This has led to observation and research, and it is now felt by some of the more advanced students that the center of self-consciousness will in time be divided into the two centers of self-consciousness and ambition. The experiments of the writer seem to confirm this belief, and his observations seem to show the expression of self-consciousness through the front part of this center, and of ambition through the back part.

Caution. The function of this faculty is to give a sense of danger, carefulness, watchfulness, and security. This faculty is located between reserve and self-consciousness. It was localized by Dr. Gall, who was led to think that irresolution, indecision, and circumspection, might depend on the development of certain convolutions of the brain, by observations made on two individuals who were very remarkable for these qualities; one was a clergyman, of great sense and much wit, but who was so fearful of committing himself, that his conversation became exceedingly tiresome; he repeated the same thing over and over, as if to assure himself that it expressed his meaning in an exact manner. His conduct was in unison with his manner of speaking. The most insignificant undertaking was subjected to the severest examination, and the most rigorous calculation. The other was a lawyer, who, by his extreme irresolution, obtained the surname of *Cacadubio*. Concerning this Dr. Gall states:

What particularly struck me was, that both heads were very broad in their upper, lateral, and hind parts. This extraordinary breadth, coinciding with the particular character of these two men, whose qualities and faculties were very different, and who resembled each other only in their circumspection, and in this conformation of their heads, suggested to me the idea that irresolution, indecision, and circumspection might be connected with this large development of the brain. In a short time, my own reflections, and the new facts presented, converted my presumption into certainty.

A large development of these convolutions raises the superior-posterior outer portion of the parietal bone into a lateral prominence, so that, to the eye and touch, the head presents a very broad surface in its superior-posterior lateral region. On the contrary, it will be narrow in this region when this organ is moderate; as in heedless, inconsiderate, precipitate persons, beggars, and the visionary. I found it large in two bankers,

brothers, who gave excellent advice; engaged in no commercial enterprise without considering all the possible chances; and managed their bank with extreme prudence. I have never found a skilful physician without its marked endowment. Patients with it very large think it a bad sign if the doctor calls often, and neglectful if he don't. The two patients who, though well off, were afraid they might die of hunger, had it large; and one who broke up his air-gun, lest if any one should be shot his house might be searched, and he charged with it; who sat up most of the night and kept examining his door to see if he had locked it, and his papers, for fear they might be stolen, had not only a very broad head, but on each parietal bone a prominence projecting out like the segment of a sphere, and denoting an extraordinary development of the subjacent cerebral part. Most melancholic patients present this organization. I have a list of eleven hundred and eighty suicides, of whom five hundred and twenty-six were melancholic.

Although Dr. Gall localized caution there was a difference of opinion between him and Dr. Spurzheim regarding its expression. There has been no difference of opinion regarding its function among the disciples of these two pioneers. In speaking of it Dr. Spurzheim says:

We often meet with individuals who are naturally timid, fearful, and undecided; while others act promptly. Many children are very timorous, and easily frightened. Females are more careful than males. Finally, whole species, and different individuals of the same species, evince different degrees of shyness. This feeling must, therefore, be considered as fundamental.

When treating of courage, I said that anxiety and fear could not result from want of this faculty, but must be positive affections of some other faculty. In my opinion this is it.

When caution is abnormally strong it manifests in anxiety, apprehension, irresolution, indecision, procrastination, suspense, and fear. When it is deficient it is shown in recklessness, rashness and venturesomeness. Like all other powers of the mind, caution is cultivated through use and restrained by being permitted to remain inactive.

CHAPTER XIII

MORAL AND SPIRITUAL POWERS

The Moral and Spiritual Powers are: Conscience; Hope; Faith; Intuition; Benevolence; and Reverence. These give expression to the highest phases of human character, and in connection with the intellectual powers should always rule the appetites, passions, and desires.

Conscience. This is the still, small voice within each individual, giving the urge to do right. It is the monitor of duty, truth, justice, integrity, and right. It is located on either side of the back part of firmness. It was localized by Dr. Spurzheim. Conscience does not decide what is right and what is wrong, but it always urges the individual to do right. Dr. James P. Browne, in treating of this faculty, says:

On each side of the organ of firmness and between it and caution there is a part of the brain which bears no fixed proportion, as to size, to either of these organs. Gall did not seem prepared to associate this part of the head with any special function. But, as it bears no regular proportion in regard to magnitude to the parts surrounding it, it cannot be supposed to share in the manifestation of any of the affections of which those parts are proved to be, beyond all reasonable controversy, the true material exponents. In course of time, Spurzheim found that this part of the top of the head was always large in persons who had the reputation of being just in their dealings, while it was small in thieves, and in people of bad character, who did not feel the injustice of their conduct; and, after satisfying himself by reasoning that the sense of justice is a primitive sentiment, he named that part the organ of conscience.

Gall did not see any necessity for this new organ. He considered conscience, or the moral sense, to be the primitive function of the organ of benevolence, of which he thought charity and sympathy to be more impassioned modes of action. Spurzheim, on the contrary, argued that the sense of justice was a primitive faculty, distinct from benevolence.

It is true that the moral sense or the love of justice, taken in its most comprehensive signification, cannot be manifested without benevolence. But the abstract sense of justice does not appear to originate in the same source. On the contrary, the gentle voice of charity has frequently been hushed by the stern mandate of conscience; and mercy, the most divine of human attributes, is known to exert its power in mollifying the harshness of retributive justice.

George Combe, in speaking of the faculty of conscience, said :

After more than thirty years' experience of the world in actual life, and in various countries, I cannot remember an instance in which I have been permanently treated unjustly by one in whom this organ and intellect were large. Momentary injustice, through irritation or misrepresentation, may have been done; but after correct information and time to become cool, I have found such persons ever disposed to act on the dictates of conscience; as well satisfied with justice. Nor have they ever maltreated me, though we differed greatly in opinion, but they represent my statements fairly, and meet them with honest arguments; while my opponents who lack this organ have not scrupled to use falsehood, misquotation, and misrepresentation as weapons of attack. Those in whom it is powerful are disposed to regulate their conduct by the nicest sense of justice; are earnest, upright, and direct in manner; inspire confidence; and convince us of their sincerity. It leads to punctuality in keeping appointments so as not to waste their time; to the ready payment of debts; will not send collectors away unsatisfied except from inability to pay; are reserved in making promises, but punctual in keeping them; and when favorably combined, are consistent in conduct, and pleasing in manners. Its predominance makes a strict disciplinarian and a rigid but just master; invests all actions with a sense of duty; thereby sometimes rendering estimable persons disagreeable.

One in whom it is small, when attached to a friend, is blind to all his imperfections, and extols him as immaculate; yet makes this model, if he offends, a monster of ingratitude and baseness. He passes in an instant from an angel to a demon. With love of praise large, he will adopt every means to please and flatter his friend; make his points; side with his extravagant hopes; pretend to love and hate as this friend does, irrespective of justice; lets his own predominating sentiments rule him for the time being; is kind and harsh by turns; admires when favorably, and condemns when unfavorably, affected; is always unregulated by principle; not scrupulous, and rarely ever condemns his own conduct; may be amiable, but can never be relied on where justice is concerned; is a poor judge; exacts too much or too little; and as seller, misrepresents, adulterates, or overcharges; depreciates goods, or evades payment, etc. No sentiment is more incomprehensible to those in whom it is deficient. Madame de Staël says Bonaparte could never comprehend men of principle. It is essential to a philosophic mind.

The excessive action of conscience is made manifest in morbid self-condemnation for real or imaginary transgressions of the moral law. When it is deficient there is only a feeble sense of justice, honesty, and truth. In this twentieth century competitive age this faculty is more often deficient than abnormally strong, and there is more need for cultivating it through righteous thought and action than of restraining it.

Hope. This faculty is manifested in optimism, expectation, anticipation and buoyancy. It was localized by Dr. Spurzheim, and is situated immediately in front of conscience. In

speaking of this faculty, on page 895 of "Human Science," Prof. O. S. Fowler says:

Spurzheim and Combe regarded this organ and faculty as fully established, but Gall leaves this place unmarked.

In speaking of this faculty Dr. Spurzheim says:

Gall considers hope as belonging to, or as a part of the function of every faculty; but I think that he confounds this peculiar feeling with desire, or want. Every faculty being active, desires; therefore even animals desire; but there is something more than this in man—a peculiar feeling which is by no means proportionate to the activity of any other faculty. We may desire ardently, and yet be without hope.

The sentiment of hope is indeed necessary to the happiness of mankind in every situation. It often produces more satisfaction than even the success of our projects. Its activity, however, varies greatly in different individuals; while some easily despair, others are always elated and find everything for the best; constant hope sustains them in the midst of difficulties; the first plan for accomplishing any object having failed, only stimulates them to form new ones; which they confidently expect will succeed. Those who are everlastingly scheming, or building castles in the air, possess this faculty in a high degree. It seems to induce a belief in the possibility of whatever the other faculties desire, without producing conviction; for this results from reflection.

This sentiment is not confined to the business of this life; but passing the limits of present existence it inspires hope of a future state, and belief in the immortality of the soul.

The following conclusions were reached by George Combe, after careful study and research:

The faculty of hope favors the exercise of faith, and disposes to belief in a happy life to come. May not the existence of a future state be inferred from this faculty, as that of a God was from reverence? May not its instinctive tendency to leave its present scene of enjoyments, and to expatiate even in imagination in the fields of an eternity hereafter, denote that man is formed for a more glorious destiny to come? Phrenology shows that man's ardent hope, and longing after immortality results from two faculties, love of life, and hope.

When hope is abnormally strong it manifests in air-castle building, unreasonable anticipations and reckless speculation. When it is deficient it causes pessimism, despondency, despair and melancholy. It is greatly modified by the environment of the individual and the degree of success with which he meets, but when it is abnormally strong, as it was in Mr. Micawber, mentioned in Dickens' "David Copperfield," the individual can be happy and hopeful in most any kind of environment.

Faith (or Spirituality). This faculty gives spiritual perception, belief in the unseen, visions, presentiments, faith in immortality. The organ through which spirituality functions is situated immediately above ideality. The following comments by George Combe explain the views of Drs. Gall and Spurzheim, and himself, regarding this faculty :

Dr. Gall observed, that some individuals imagine themselves to be visited by apparitions of persons dead or absent; and he asks, "How does it happen, that men of considerable intellect often believe in the reality of ghosts and visions? Are they fools, or impostors? or is there a particular organization, which imposes, in this form, on the human understanding? and how are such illusions to be explained? He then enters into a historical sketch of the most remarkable instances of visions. Socrates spoke frequently and willingly to his disciples of a demon or spirit, which served him as a guide. Dr. Gall remarks, that he is quite aware of the common explanation, that Socrates referred only to the force and justness of his own understanding; but adds, that if he had not himself believed in a genius communicating with him, the opinion that he had one would have been lost in the twenty-three years during which Aristophanes made it a subject of ridicule, and his accusers would not have revived it as a charge against him. Joan of Arc also related an appearance of St. Michael to her, who told her that God had pity on France and that she was commissioned to raise the siege of Orleans, and to install Charles VII. as king, at Rheims. Tasso asserted himself to have been cured by the aid of the Virgin Mary and St. Scholastic, who appeared to him during a violent attack of fever. In the historical notes which accompany the Life of Tasso, the following anecdote appears, extracted from the Memoirs of Manso, Marquis of Villa, published after the death of Tasso, his friend:

"Tasso, in his delirium, believed that he conversed with familiar spirits. One day when the Marquis endeavored to drive these ideas from his mind, Tasso said to him, 'Since I cannot convince you by reason, I shall do so by experience; I shall cause the spirit, in which you refuse to believe, to appear before your own eyes.' 'I accepted the offer,' says the Marquis, 'and next day, when we sat by the fire conversing, he turned his eyes towards the window, and, looking with steadfast attention, appeared so completely absorbed that when I called to him he did not answer. "See!" said he, at length, "See! my familiar spirit comes to converse with me." I looked with the greatest earnestness, but could see nothing enter the apartment. In the meantime, Tasso began to converse with this mysterious being. I saw and heard himself alone. Sometimes he questioned, and sometimes answered; and from his answers I gathered the sense of what he had heard. The subject of his discourse was so elevated, and the expressions so sublime, that I felt myself in a kind of ecstasy. I did not venture to interrupt him, or to trouble him with questions, and a considerable time elapsed before the spirit disappeared. I was informed of its departure by Tasso, who, turning towards me, said, "In future you will cease to doubt." "Rather," said I, "I shall be more skeptical; for although I have heard astonishing words, I have seen nothing." Smiling, he replied, "You have perhaps

heard and seen more than——” He stopped short; and, fearing to importune him by my questions, I dropped the conversation.”

Dr. Gall quotes this dialogue from “*La Vie du Tasse, publiee a Londres en 1810*”; and I have translated from his French version.

Swedenborg believed himself miraculously called to reveal to the world the most hidden mysteries. “In 1743,” says he, “it pleased the Lord to manifest himself to me, and appear personally before me, to give me a knowledge of the spiritual world, and to place me in communication with angels and spirits, and this power has been continued with me till the present day.” Swedenborg, say his biographers, was a man of unquestioned sincerity, but one of the most extravagant enthusiasts that ever existed.

Dr. Gall remarked, in the first fanatic who fell under his observation, a large development of the part of the brain lying between the organs of ideality and imitation, and subsequently met with many similar instances. Dr. Jung Stilling, whom he often saw with the late Grand Duke of Baden, was a tailor in his youth, then a tutor, afterwards doctor in medicine, moralist, divine, journalist, illuminatus, and visionary; and in him this part of the brain was largely developed. He believed firmly in apparitions, and wrote a book in exposition of this doctrine. In the *Maison de Detention* at Berne, Dr. Gall saw a fanatic, who believed that Jesus Christ, surrounded by a brilliant light, as if a million of suns had combined their splendors, had appeared to him to reveal the true religion. A gentleman who moved in the best society in Paris, asked Dr. Gall to examine his head. The Doctor’s first remark was, “You sometimes see visions, and believe in apparitions.” The gentleman started from his chair in astonishment, and said that he had frequent visions; but that never, up to this moment, had he spoken on the subject to any human being, through fear of being set down as absurdly credulous. On another occasion, Dr. Gall, when he observed the development of the head of a Dr. W., told him, that he ought to have a strong liking for the marvellous and supernatural. “For once,” replied he, “you are completely mistaken, for I have laid down the rule to believe in nothing which cannot be mathematically demonstrated.” After talking with him on various scientific subjects, Dr. Gall turned the conversation towards animal magnetism, which appeared a fit topic to put the mathematical rigor of his proofs to the test. He instantly became greatly animated; assured Dr. Gall again very solemnly, that he admitted nothing as true that was not mathematically demonstrated; but added, he was convinced that a spiritual being acted in magnetism,—that it operated at great distances,—that no distance indeed presented an obstacle to its action,—and that, on this account, it could sympathize with persons in any part of the world. “It is the same cause,” continued he, “which produces apparitions. Apparitions and visions are rare, no doubt, but they undoubtedly exist, and I am acquainted with the laws which regulate their production.” “On this occasion,” says Dr. Gall, “I thought within myself, that my inference from his development was not so very erroneous as the worthy doctor wished me to believe.”

The views of Dr. Spurzheim on this faculty are thus expressed in his “*Phrenology*,” P. 206:—“There is still a sentiment which exerts a very great influence over religious conceptions, and which, in my opinion, contributes more than reverence to religious faith. Some find all things natural, and regulated by the laws of creation; many others are amused

with fictions, tales of wonders, and miraculous occurrences. They find in every passing event extraordinary and wonderful circumstances, and are constantly searching after whatever can excite admiration and astonishment. This sentiment is to be observed among mankind at large, both among savages and civilized nations. The founders of all nations have had a fabulous origin ascribed to them, and in all countries miraculous traditions and marvellous stories occur in ample abundance. It is more or less active, not only in different individuals, but also in whole nations. Its functions are often disordered, constituting one species of insanity. The legislators of antiquity, aware of the great influence of this faculty, made frequent use of it to enforce and to confirm their laws. They spoke in the name of God, of angels, or of supernatural powers. In our own days, the religious sects of Swedenborgians, Quakers, and many others, particularly demonstrate its influence and presence. The existence of this feeling is certain."

My own observations on this organ are the following:—When the organ predominates, there is a peculiar look of wonder, and in an unconscious turning up of the exterior portions of the eye-lashes, expressive of surprise. In other persons, I have found the part of the brain in question small, and in them it was accompanied with a staid soberness of feeling, diametrically opposite to the manifestations above described. Such individuals were annoyed by everything new or strange; they scarcely felt or expressed surprise, and had no taste for narratives leaving the beaten track of probability or reality, and soaring into the regions of supernatural fiction. On analyzing these manifestations, they all appear to be referable to the sentiment of Faith, an emotion which is quite distinguished from those hitherto enumerated.

The fact, mentioned by Dr. Spurzheim, that persons in whom this organ is large have a natural disposition to believe in the wonderful and miraculous is certain. Some individuals, so endowed, have informed me, that when any marvellous circumstance is communicated to them, the tendency of their minds is to believe it without examination. Individuals in whom the organ is large, will delight in extraordinary narratives, and the pleasure felt in them will render the intellect little prone to enter on a severe scrutiny of their truth; hence the tendency to believe in such communications is easily accounted for.

Dr. Spurzheim concludes his account of this faculty with the following remarks: "The preceding facts," says he, "determined me formerly to designate this feeling by the name of supernaturality; and it is certain that it is principally manifested by a belief in miraculous and supernatural circumstances, in the foundation of religion by supernatural means, and in its dogmatical points. As, however, the feeling may be applied both to natural and supernatural events, and in every case fills the mind with amazement and surprise, I do not hesitate to change the name of supernaturality to that of marvellousness."

The following incident, showing a remarkable expression of this power, is taken from Upham's "Life of Fremont," page 287:

On one occasion when Col. Fremont was encamped among the rugged mountain passes, 12,000 feet above the sea, it became necessary to send several of his men to the Spanish settlements of New Mexico to obtain

provisions and also to purchase mules to aid in the transportation of his baggage. After the departure of his men he became anxious for their safety, and with several of his brave companions traveled 160 miles, in the snow and on foot. At length, on the evening of the tenth day—when the four men who had undertaken to reach the Spanish settlements had been out twenty-two days—he found three of them exhausted and ready to perish—King, the leader of the little band, having already expired from hunger and fatigue. In speaking of this incident, Col. Fremont says: “I look upon the anxiety which induced me to set out from the camp as an inspiration. Had I remained there waiting the arrival of the party which had been sent in, every man of us would probably have perished.”

The abnormal expression of faith is manifested in superstition, fanaticism, and extreme credulity. A deficiency is manifested in skepticism and unbelief. This faculty can be restrained by giving more attention to the study of the sciences, and less to the things pertaining to the invisible world. When deficient, faith can be cultivated by studying the things that pertain to man’s spiritual nature and to his future existence.

Intuition. This faculty gives telepathic and psychometric knowledge of the innate qualities of persons and things. It is located immediately above comparison, in the most prominent place on the forehead, and was localized by Prof. L. N. Fowler, who called it Human Nature, but the function of this power includes activities not mentioned when it was first localized, hence the word “Intuition.” Prof. N. N. Riddell, in his book, “Human Nature Explained,” on page 203 says:

Human nature is the sentiment that gives the intuitive, or sense perception of the character, disposition, and peculiarities of others. It is instinctive, and therefore does not depend on observation, knowledge, or reflection, but upon intuition. Aside from the conceptions arising from observation, comparison, memory and reflection, man has an instinctive intuitive judgment of the peculiarities of his fellow men. It bears the same relationship to our fellow men that spirituality bears to God.

It requires the sentiment of human nature to give us that intuitive perception of the inner soul nature of our fellow men. In proportion to the strength of this sentiment will a person be able to form a correct conception of the inner nature of another. Those in whom this sentiment is very strong seem able to understand the feelings and desires, the joys and sorrows of everyone they meet. With benevolence strong they seem able to give even to the stranger the help of which he is most in need. In the broader manifestation of this sentiment through its combination with other elements it becomes the basis of intuition not only as pertains to human nature, but other things as well. All are familiar with the fact of how some men seem to know by instinct what is best even in the absence of any evidence on which to base a rational conclusion. Intuitive guidance is a fact in the life of many. A sentiment so important to the

well being of humanity, so conducive to happiness, should be assiduously cultivated by all.

The discoveries in telepathy and psychometry that have been made during the past century have thrown new light upon the study of psychology and upon the finer forces of nature; hence there is need of more careful investigation concerning the relationship of these new discoveries to the powers of mind. From the best evidence at hand it appears that these finer intuitions of life are received directly through the brain centers used by intuition.

Prof. O. S. Fowler, in his book, "Human Science," page 1134, in speaking of this mental power, says:

Men read each other intuitively, and the first impressions intuitively entertained of their fellow men are generally correct. This intuitive character reading is an ordinance of nature; a divine contrivance, a law of things, a natural science. It extends even to animals. Some mental faculty must adapt man to this natural ordinance. This needed faculty intuition supplies. It also gives an intuitive perception of things as well as of people.

Discerning universal truth is another of its functions, and that still more important. Since it reads men, why not also other truths equally. Intuitive perception of universal truth from little data is its specialty. Men certainly do possess this gift; and some to a much greater extent than others. In some the merest inkling suffices to put them upon the track; when they jump instantly and correctly to results. Straws show them which way the wind blows. Discoverers have this gift, and with it this organ large. It scents truth as the hound does the fox, and apprehends it, not by labored ratiocination, nor induction, nor deduction, but by intellectual inspiration and intuitive discernment. We have seen man's need and possession of spiritual intuition; he equally needs intellectual inspiration, some window to his mind opening out above towards all truth, through which it may enter his understanding to expand and feed his soul. We say without fear of contradiction that all who possess this capacity or organ in whatever degree will be found to possess the other in a like degree.

No element of nature should be more assiduously improved, because none confers a capability more useful or delightful.

The excessive action of intuition is manifest in abstract speculations and explanations of psychic phenomena. A deficiency is shown in lack of ability to judge persons and things intuitively. The habits and life of the individual have much to do in cultivating or restraining this tendency. Gross living is not conducive to intuitive perception of persons and things.

Benevolence. This power of mind gives compassion, sym-

pathy, generosity, kindness, and a love for humanity. It is situated above intuition, and was localized by Dr. Gall. George Combe, in treating the organ of benevolence, gives the following account of Dr. Gall's discovery :

One of Dr. Gall's friends frequently said to him, that, as he sought for external indications of mental qualities, he ought to examine the head of his servant named Joseph. "It is impossible," said his friend, "to find a greater degree of goodness than that young man possesses. For more than ten years during which he has been in my service, I have seen him manifest, on all occasions, only benevolence, and sweetness of disposition. This is the more surprising, as he does not possess the advantages of education, and had grown up to manhood among servants of very inferior habits." Dr. Gall adds, that, previously to that time, he had been far from supposing that what is called goodness of heart could have any organ in the brain, and, consequently, had never looked for indications of it in the head. The repeated solicitations of his friend, however, at length awakened his curiosity.

He immediately recollected the habitual conduct of a young man whom he had known from his most tender infancy, and who was distinguished from his numerous brothers and sisters by his goodness of heart. Although he was passionately fond of the games proper to his age, and delighted in scouring the forests in search of birds' nests, yet no sooner did any of his brothers or sisters become sick, than an inclination still more powerful kept him at home, and drew from him the most assiduous attention towards the sufferer. When grapes, or apples, or cherries, were distributed among the children, his share was always the least, and he rejoiced in seeing the others partake more largely than himself. He was never more pleased than when some good fortune happened to those whom he loved, on which occasions he often shed tears of joy. He was fond of taking charge of sheep, dogs, rabbits, pigeons, and birds; and if one of these birds happened to die, he wept bitterly, which did not fail to draw upon him the ridicule of his companions. Up to the present time, continues Dr. Gall, benevolence and goodness are the distinguishing characteristics of this individual. These dispositions certainly did not arise from education; on the contrary, he had been all along surrounded by those whose conduct was calculated to produce the very opposite results. Dr. Gall then began to suspect, that what is called goodness of heart is not an acquired, but an innate, quality of the mind.

On another occasion, amidst a very large family, he spoke of the boasted goodness of heart of the servant Joseph. "Ah!" said the eldest daughter, "our brother Charles is exactly like him; you must positively examine his head—I cannot tell you how good a child he is."

"I had thus in my eye," says Dr. Gall, "three cases in which goodness of disposition was strongly marked. I took casts of the heads, placed them beside each other, and continued to examine them until I should discover a development common to the three. This I at last found, although the heads were in other respects very differently formed. In the meantime, I tried to find similar cases in families, schools, &c., that I might be in a condition to multiply and correct my observations. I extended my investigations to animals also, and, in a short time, collected so great a number of facts, that there is no fundamental quality, or

PLATE I



PHASES OF HUMAN NATURE.

1 and 2. Precocious boy.—3. Mischievous boy.—4. Prize baby.—5. Laura Bridgman, deaf, dumb and blind girl.—6. Three-story brains.—7. Vim, vigor and vitality.—8. Poise.—9. Shelley, nervous system predominating.—10. Landseer, symmetrical development.—11. Beecher, nutritive organs predominating.—12. Fox, motor organs predominating.

PLATE II



PHASES OF HUMAN NATURE.

1. O. S. Fowler, strong perception and intuition.—2. Dr. A. R. Wallace, F.R.S., scientist.—3. Mrs. W. J. Bryan.—4. Mrs. James Allen.—5. E. A. Poe, strong creative imagination.—6. Wm. Tebb, reformer.—7. Miss Bryan.—8. Miss Allen.—9. Judge Ben. Lindsay.—10. Gladstone, executive.—11. W. J. Bryan.—12. James Allen.—13. Dr. Samuel Sprecher, spirituality.—14. John Tyndall, scientist.—15. Dr. J. M. Fitzgerald, character analyst.—16. Gen. G. W. Goethals, engineer.

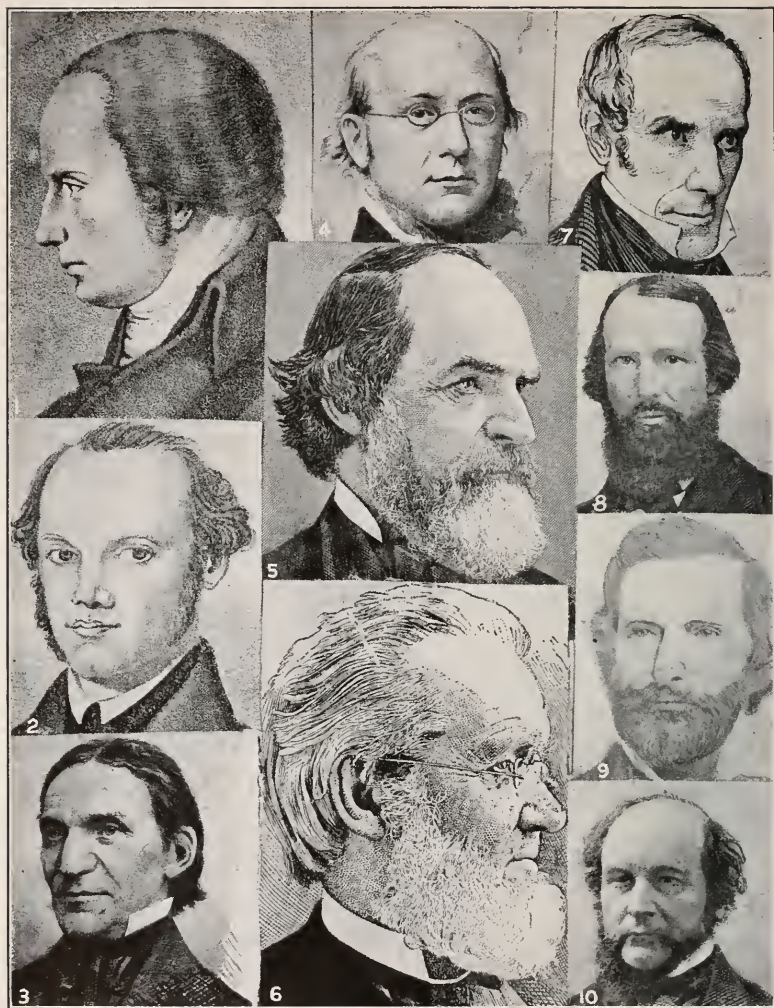
PLATE III



VOCATIONAL TYPES.

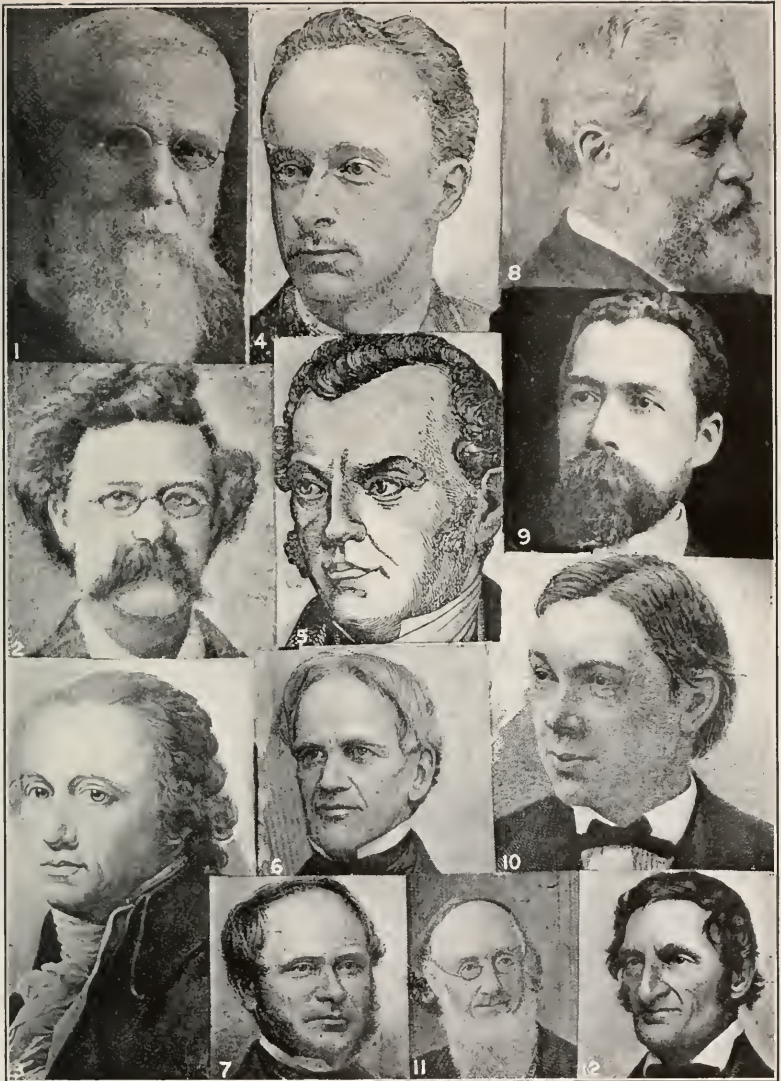
1. Dr. Charles Caldwell, self-reliance.—2. Dr. W. C. Ruediger, educator.—3. R. C. MacLean, as Brutus (from an oil portrait by W. J. McCloskey).—4. Dr. Mary Wood-Allen, fine quality.—5. Blackhawk, strong powers of self-preservation.—6. Dr. H. F. Lutz, educator.—7. Dr. J. W. Taylor, phrenologist.—8. George Combe, philosopher.—9. Naomi Miller, secretary.—10. Dr. John T. Miller, editor, and author of this book.—11. Mrs. J. T. Miller, mother and social welfare worker.—12. W. H. Wright, as Othello.—13. Mrs. Louisa W. Cheney, domestic science teacher and nurse.

PLATE IV



PROMINENT PHRENOLOGISTS.

1. Dr. F. J. Gall.—2. J. Stanley Grimes.—3. Cyrus Pierce.—4. Horace Greeley.—
5. Nelson Sizer.—6. Dr. J. R. Buchanan.—7. Dr. Andrew Combe.—8. Dr. R. T. Trall.
—9. Dr. Samuel G. Howe.—10. George B. Emerson.



PROMINENT PHRENOLOGISTS.

1. Dr. A. P. Davis.—2. Prof. J. Millott Severn.—3. Dr. F. J. Gall.—4. W. J. Colville.—5. Dr. J. G. Spurzheim.—6. Horace Mann.—7. Henry Barnard.—8. W. Mattieu Williams.—9. Prof. L. A. Vaught.—10. Dr. John Cowan.—11. G. S. Weaver.—12. Dr. Wm. A. Alcott.

PLATE VI



VOCATIONAL TYPES.

1. Roy Southwick, inventor.—2. Gov. John C. Cutler.—3. Prof. N. L. Nelson.—4. Henry Ford, honest business man.—5. George A. Startup, reformer.—6. N. L. Morris, social welfare worker.—7. Prof. George Morris, phrenologist.—8. Dr. F. F. Strong, inventor.—9. John Burroughs, naturalist.—10. Luther Burbank, plant wizard.—11. Dr. D. V. DeSaffery, phreno-psychologist.—12. Thomas A. Edison, inventor.

PLATE VII



VOCATIONAL TYPES.

1. Dr. K. J. Miller, dentist.—2. Dr. J. H. Kellogg, author and physician.—3. Dr. J. M. Peebles, world citizen.—4. Dr. E. D. Babbitt, human culturist.—5. Anton Hromatka, phrenologist.—6. E. D. Harrison, watchmaker.—7. D. R. Wheelwright, contractor.—8. A. D. Miller, builder.—9. Dr. George Starr White, physician and author.—10. Dr. Theo K. Miller, physician.—11. J. W. Payne, salesman and character analyst.—12. Dr. Karl G. Maeser, educator.

PLATE VIII



VOCATIONAL TYPES.

1. Darwen Roylance, naturalist.—2. W. H. H. Garver, business educator.—3. A. F. Sheldon, business philosopher.—4. MacGregor Walmsley, engineer.—5. Claude Woolley, mechanic artist.—6. N. Y. Schofield, credit man.—7. C. O. Vandivier, publicity manager.—8. Willard Hansen, model farmer.—9. W. E. Youngquist, phrenologist.—10. W. H. Haddock, certified accountant.—11. Ernest Dawson, bookseller.—12. Moyle Petersen, mechanic artist.—13. R. Seare, poet.—14. W. J. Prater, photo artist.—15. Joseph Lembock, architect.—16. H. S. Allen, secretary.

faculty, whose existence and organ are better established than those of benevolence."

The faculty produces desire of the happiness of others, and delight in the diffusion of enjoyment. It disposes to active goodness, and, in cases of distress, to compassion. It is easy to distinguish kindness flowing from this sentiment, from acts of attention arising from love of approbation or more interested motives. A warmth and simplicity of manner, and a directness of purpose, are communicated by this faculty, that touch the mind at once. We feel its character, and recognize it as genuine unalloyed goodness, aiming at no end but the welfare of its object. There is on the other hand, an air of "empressement" evidently assumed, or of coldness and constraint, attending deeds of kindness proceeding from interest motives, betraying the source from which they flow. The secret spring, and ulterior object, are apparent, notwithstanding the efforts made to conceal them. St. Paul gives a beautiful description of the genuine character of this sentiment, in his account of Christian charity: "Charity," says he, "suffereth long and is kind; charity envieth not; charity vaunteth not itself; is not puffed up," &c. The good Samaritan mentioned in Scripture, is a delightful instance of the disposition formed by benevolence when eminently powerful.

In treating of the faculty of benevolence, Prof. N. N. Rid-dell, in his book, "*Human Nature Explained*," page 286, says:

Benevolence, as the name signifies, is that sentiment that gives sympathy, kindness, tenderness, charity, philanthropy, generosity, and goodness. It inspires all kindly feelings for others, all sympathy for the sick, the helpless, the unfortunate, the wayward and the sinful; it gives the sense of sympathy by which one soul feels the needs and appreciates the conditions of another; it gives the love of goodness, the desire to do good not for the applause or approval of others, not that it may receive compensation, but that it may make others happy and relieve them from suffering; it gives the power and inclination to forgive, not from the sense of justice, but through pity; it is the philanthropist that would gladly divide his possessions or share his earnings to prevent the sufferings of others or to promote the welfare of humanity; it is the reformer that can never rest while selfishness and misery are the lot of man; it is the ministering angel that kindly hovers over the sick bed to tenderly administer to the sufferer: it is the good Samaritan of the soul that rejoices to serve others, ameliorate their sufferings and promote their joys; it is the angel of refuge that would stay the cruel hand of destruction and prevent it from harming whatever has the power to feel; it is the ambassador of the weak that pleads at the courts of justice in behalf of fallen humanity; it is the peacemaker that would soothe the troubled waters into tranquillity that they may more perfectly mirror the beauties of heaven; it is the cross-bearer that would carry the burdens of the world, withstand the shame and suffer the penalty of sin that the transgressor might live in peace; it is the Christ that is in man, that came not to destroy the law of justice, but to establish a higher law in the human soul, the law of forgiveness; it is the noblest, purest, holiest, most Christ-like virtue that emanates from the soul of man. Kindness is perhaps the most unselfish attribute in human nature, it seeks to do

good, render assistance, ameliorate suffering, extend sympathy, forgive errors, overlook faults and make peace, not for what any one else can return to it, but solely from the love of doing good.

Excessive action of benevolence is often manifested in providing for the present wants of the poor, without removing the causes that produce poverty. The greatest need of the present is constructive social welfare work that will remove the causes which produce vice, crime, disease, poverty and other social evils, so that benevolence will not be wounded so often and the need for curative work will be reduced. Humanity spends too much time in running the ambulance to pick up the wounded after the damage has been done, and not enough time in building the strong fence above the dangerous cliff to keep people from falling over and injuring themselves. A deficiency of benevolence is manifested in cruelty, selfishness, indifference to suffering, lack of sympathy and hospitality. In order to cultivate this faculty the individual should think less of himself and cultivate a desire to be helpful to others. Under the prevailing competitive environment, where the struggle for existence is so keen with most people, benevolence is more likely to be suppressed than over-developed.

Reverence (or Veneration). The normal expression of this power is respect, reverence, obedience, devotion, adoration, dependence and veneration. It is located between firmness and benevolence. This faculty was localized by Dr. Gall, and he speaks of it as follows:

All my ten brothers, sisters and myself received the same education, but our faculties and tendencies were very different. One brother, from infancy, had a strong tendency to devotion. His playthings were church vases, which he sculptured himself, copes and surplices, which he made out of paper. He prayed God and said masses all day, when obliged to miss church service, and passed the time in ornamenting and gilding a crucifix of wood. My father had designed him for commerce, for which he had an invincible aversion, because, he said, it compelled him to lie. At twenty-three, having given up all hope of fitting himself by study for a priest, he lost all patience, ran away from home, and turned hermit. Five years after he took holy orders, and till his death lived in the exercises of devotion and penance.

I observed in schools that certain pupils were indifferent to religious instruction, while others were very eager for it. This preinclination was born in them, and could not be attributed to example or education; and most of them devoted themselves to a religious life, contrary to parental wishes. I visited the churches of all sects, to inspect the heads of those who prayed with the most fervor, and were most absorbed in their contemplations; observed that the most fervent devotees were almost always bald, and that their heads often rose gradually to the top—precisely the

form of head which had first struck me in my brother; visited the monasteries and observed the monks, and collected exact information as to their devotional character. Those who performed the functions of priest and confessor had this organ much larger than their butlers, cooks, and servants. All those who were especially devout, have heads greatly raised towards the crowns, and that the portraits of zealous religious ecclesiastics had the same formation, and also that ancient artists represented the heads of high priests and other ministers of religion with venerable heads thus formed.

In the lunatic asylums of Amsterdam we saw a madman in whom this organ was large, and who said he could not be saved, because he was forced to sin contrary to his will. An ecclesiastic, who said he was condemned to eternal burnings, had this same form of head. Elizabeth Lindeman had this organ very large, and kept raising her eyes to heaven, testifying sadness and anguish in all her looks and gestures, alleging that she was possessed of a devil, who tried to draw her into hell.

In the collection of M. Esquirol are casts of religious lunatics, in all of whom this organ is extremely developed. It was also unusually large in a brother and sister, peasants, who were attacked periodically with a religious insanity.

In the head of Christ, by Raphael, the organs of the propensities are deficient, whilst, on the contrary, His intellectual and moral organs, or those which indicate sagacity and penetration, benevolence and worship, are greatly developed. Is this form imaginary, or a faithful copy of its original? If artists, in making it, have copied the shape most commonly found in great and good men, their observations confirm mine; yet the general form of the head of Christ has probably been transmitted to us. Luke was a painter, and doubtless wished to preserve the likeness of his master. This form is certainly one of great antiquity, for we find it in mosaics, and the most ancient paintings, the Gnostics of the second century possessing it.

Religious mania often coexists with the other active faculties in health, sometimes with physical love, causing its coexistence with erotic desires; at other times with murder, or suicide, or pride, or fear, or sympathy. A deranged hussar manifested an intense desire for the salvation of the whole human race, constantly calling the Holy Trinity to witness. It is thus shown by the states of both disease and health, that the sense of the existence of a Supreme Being, and the propensity to religious worship, are fundamental qualities of the human race, and consequently must be produced by a separate faculty of the mind, and organ of the brain.

Prof. N. N. Riddell in his book, "Human Nature Explained," on page 281, says of Reverence:

Reverence is that sentiment that forms the attachment between man and his God; it is the affinity of the soul for the Supreme Being; it gives the innate love, veneration for and desire to worship a superior. As parental love draws the parent instinctively to the child and forms that strong attachment between parent and child, so through reverence man is instinctively drawn towards his Creator and inspired to worship, adore and do homage to His name; it is an affection, a love, as positive, real,

warm and imperative in its demands for activity as the parental instinct. It gives the tendency to love and revere what spirituality assures us really exists; it is substantially and distinctively the sentiment of prayer, through which the soul breathes forth its longings, pours out its emotions and makes known its desires to a Supreme Being. In the history of the human family, Reverence has played one of the most interesting, significant and important parts. The tendency to worship the supernatural is an innate attribute of human nature. It is said that there has never been a race or tribe of people discovered but what had some form of worship; the objects of their worship have been as variable as human invention, fancy and fear could conceive of; man has worshipped almost everything in nature, from the pebble that he crushes beneath his feet to the sun that lights the universe. No mind can be perfected, no other element can rise to its highest degree of usefulness, no character can be made to conform to the highest ideal pattern of human life, without the sanctifying influence of Reverence. The real life will never rise above the ideal; a high ideal is a prerequisite to human progress and human perfection, therefore he who would direct his energies, purify his feelings, exalt his affections, enrich his learning, ennoble his ambitions, perfect his character and elevate his nature to the acme of human goodness and greatness must give full expression to Reverence.

The abnormal expression of reverence is in idolatry, religious bigotry, intolerance, hero-worship, servility, and a slavish submission to established conditions which results in ultra conservatism. When reverence is deficient there is a lack of veneration for a Supreme Being, superior officers, or established customs. In American life the faculty of reverence is much less in evidence than in European countries.

The strongest evidence that man is by nature a religious being is found in the fact that he has innate powers that are related to the highest expression of religious life. When these powers are normally expressed they contribute to human happiness and connect individual lives with the infinite and the eternal. The abuse of these noble powers has caused untold human suffering through persecutions and all kinds of so-called religious intolerance. Fortunately in this twentieth century religious freedom and toleration is rapidly increasing and intolerance is becoming more and more a matter of history only. When all human beings agree on the fundamental principles of religious life and tolerate individual expression of non-essentials there will exist a universal religion that will help to develop the highest innate tendencies of every individual and will aid all in living the truly religious life.

CHAPTER XIV

SELF-CULTURE

We have now considered all the fundamental powers of life, and every one is good if it is used right. All evil that exists in the world results from the misuse of the innate powers that constitute the organization of every human being.

In improving the human race the right starting point is with parentage, but as it is impossible to give any inheritance to an individual who is now in the world the only hope for improving his life is through right environment and the personal efforts of each individual. No person has such perfect control of all his powers that he can boast of perfection. The work that is before him is to restrain tendencies that are excessive and cultivate those that are deficient in order to produce harmony in his life. There are very few human beings who live up to their ideals, or who are taking advantage of present environments as much as they might. Life is a constant conflict between the individual and his environment. As the surroundings of each individual improve it will be easier for him to live up to his ideals, and the nearer people live to correct ideals the better the environment will become. Thus there is action and reaction. Too many persons blame others for their short-comings, instead of looking within, analyzing self, and making personal adjustments. There has long been a tendency on the part of many individuals to excuse their weaknesses by blaming them upon their ancestors. People are frequently heard to say, "My father or my mother had this weakness, and I have inherited it." Doubtless the tendency has been inherited from ancestors, but through will power and the right kind of environment undesirable tendencies can be overcome.

As each individual is organized differently from all other individuals he has his own problems to solve in self-culture, and cannot be guided entirely by the ideals of others. It is easy for a person who has no temper to give advice to quick-tempered people on how to overcome that undesirable trait of

character, but what a battle the quick-tempered individual must fight in order to control his temper if he is placed in an environment where his energy centers continually explode in anger. The best remedy for such a condition is for the individual to get into a vocation and an environment where his feelings are not antagonized and his temper is not aroused. It is easy to advise people about the necessity of changing such a tendency, but as long as the causes that produce temper are not removed it is very difficult to overcome it. Not long ago a young man confessed that he had lost a good position the day before because he became angry and said things to his employer that he should not have said; hence he was discharged. He said that he had lost several good positions in the same way, and did not blame anybody else for it because it was all due to his violent temper; and the remedy is in getting control over it. This may be an extreme case, but there are many persons who are made miserable themselves and who make the lives of others miserable without a desire to do injury to anybody, but who lack will power and the right kind of environment to keep the temper under control.

The first step in self-control is to take stock of the mental equipment. The system of character analysis, already explained, is the best guide in this self-analysis; and serves later in making the adjustments that are necessary to modify the tendencies and to make the most of life. While studying about the primary elements of mind the individual looks within to see how his tendencies harmonize with the normal or abnormal expression of those powers of mind. When he has discovered the trouble his next step is to labor faithfully to overcome the undesirable tendency. In many instances the weakness is due to a conflict between some appetite or passion and the intellectual and moral powers. In such cases, when the mental adjustments are made the activity is reduced in the brain center that functions excessively and is increased in the brain center that needs to be cultivated.

In education there has been a tendency to give too much attention to the intellectual powers that are used in gathering and classifying facts pertaining to external objects and not enough attention has been given to the mischief-working impulses that are the cause of most human discords. Each individual must learn to do for self what the schools fail to do for him regarding the knowledge and control of the feelings.

In the analyzing of self for the purpose of self-culture it

is well to begin with the powers that are first awakened, and by examining each one separately, observe which of them are functioning normally in the organization and which need modifying.

Appetite is one of the first powers to express itself in the new-born infant and is a very prominent factor throughout life. Does the individual select carefully the materials that are needed to build healthy tissues in the body? and, Does he live to eat, or eat to live? are questions each person should answer. The normal function of appetite is to call attention two or three times a day to the need of providing the body with material that will keep up vitality. The abnormal gratification of this power causes waste of nerve force in digesting and disposing of materials that the system does not need and cannot use. If one wishes to keep a reserve of vitality and always remain in efficient working condition he must learn to properly select and combine foods so as to furnish the proper nourishment to all the tissues of the body. The bad effect of alcoholic drinks has become so evident that a world-wide effort is being made to prohibit their manufacture and sale. It has been demonstrated to the satisfaction of scientific workers that the most efficient work can be done by persons who avoid the use of stimulants and narcotics. If one is the victim of any of these harmful substances he can increase his efficiency by discontinuing them. In the keen competition of the twentieth century health must be kept at the highest standard possible if life is to be enjoyed and success won.

The energy centers manifest themselves very early in the life of an infant and their proper cultivation is one of the essentials to a successful life. Each individual should develop the poise that will enable him to do his work without the waste of nerve force. In this strenuous age many keep their nerves pitched upon such a high key that they are exhausted before the day's work is done and there is no reserve vitality for the next day. If nerve force is lost either through strenuous nerves or in explosions of temper it is within the power of the individual to so control and direct energy that more efficient service can be rendered without calling upon the supply of nerve force that should be kept in reserve. The remedy is with the individual, and in his environment.

Courage is one of the essentials in an equipment that is necessary to successfully fight the battles of life. It manifests mentally as well as physically. Where there is a lack of this

element the individual does not exhibit the force that is necessary for efficient work. Where there is an excess of this power of mind one may be too aggressive and self-assertive to adapt himself well to others, and thus fail to establish the congenial relationship that is necessary in doing good team work.

The acquisitive instinct is aroused very early in life and in the struggle for existence usually remains active permanently. This power of mind should be used as a means to the great end of right living and of giving helpful service to others, and not as the chief end of life, in accumulating surplus dollars that cannot be used and that will not be of benefit to anybody. One of the wise men said, many centuries ago, that: "The love of money is the root of all evil." The experiences of many people have verified the truthfulness of that statement. The most successful life is likely to be the one where the real necessities are provided for, but where there is nothing to waste, and where there is always a need of doing honest work to get life's essentials. If there is a lack of the necessities of life the efficiency must be increased until the needs of the individual can be secured. Where the money god is being worshipped and the nobler things of life being sacrificed the standard of ideals must be raised. It must be remembered that life is more than merely making a living. There are many people who estimate success in dollars, but they never experience the finer joys of life that come to those who give helpful service to their fellow beings and seek to secure the highest development of their own powers. The abuse of the acquisitive instinct does more to fill prisons and reformities than any other one cause in our modern civilization.

One should have reserve enough to be tactful and discreet in his relations with others, and not be so frank and outspoken that he is constantly wounding the feelings of his friends. If adjusting is necessary here the individual can cultivate more consideration for the feelings of others and develop the tact, through reason, that will enable him to say unpleasant things without wounding the feelings of his friends. If there is too much reserve and a deficiency in sociability and self-reliance the individual may be entirely too retiring and should make a special effort to take part in public functions, which will modify reserve and make him more self-assertive.

Where there is such a lack of sociability that one may be inclined to become a hermit the tendency can be modified if the

person will take an active part in social activities until they become pleasurable and an inclination is aroused to mingle with other people, rather than to be satisfied in the entertaining of himself and living alone.

If the proper control of amativeness is a problem with the individual he should read the best books on social hygiene and eugenics and always seek the society of persons who will stimulate the intellectual and moral powers.

There is a normal instinct in every human being that gives a desire for home life. It is important when a home is established that the members live together in peace, love, harmony and unity. Domestic discords can be avoided through proper adaptation of life-mates and by an effort to establish the right relationships in the home. So many who enter upon the profession of home-making live in perpetual discord, or end their domestic careers in the divorce courts, that this problem should receive much more serious consideration from those who are married or contemplate marriage than is usually given to it. There are numerous good books on the subject of domestic happiness that should be read by every individual before taking this serious step; or, having taken it and failing to derive the happiness it should bring, may yet realize a greater degree of happiness.

If there is a lack of concentration, with the habit of beginning many things without finishing anything this can be modified by using the intellect and will power to force attention upon the one thing until it is thoroughly completed. Where there is a harmonious blending of powers, mentally and physically, it is more difficult to keep from scattering the efforts and wanting to know a little about everything than it is if there is genius for one thing only. The important consideration for the person with versatility and adaptability is to select things that are congenial and then to center all the powers of mind upon that one thing. In this age of specialization this is important in order to excel and win success in the chosen vocation.

Where there is a lack of self-reliance and too much sensitiveness to the criticisms of others mental adjustments are required that will result in overcoming the self-consciousness and enable one to perform his part in public life without embarrassment or discomfort. If a person is in a position where it is necessary to direct the efforts of others it is especially important to have the self-reliance that will enable him

to proceed with confidence. There are many who are talented but who are lacking in self-confidence and are so sensitive to the criticisms of others that they go through life without achieving what they might if these tendencies were reversed. Where there is too much self-reliance and an inclination to be proud and domineering the feelings of others should be considered more and a check put upon the tendency until it reaches a normal development. Too much energy, ambition and determination has broken down many a constitution and wrecked many a life that might have rendered helpful service to humanity if these tendencies had been kept in check. Ambition is one of the strongest incentives in many people and leads them to undertake more than they should. Where this is a tendency the individual should learn to put off until tomorrow what cannot be very well done today. Many a person is made miserable for a lifetime by excessive self-consciousness without being aware that this is a tendency that can be modified to function normally. The newsboy on the streets of our large cities teaches valuable lessons on overcoming self-consciousness and cultivating self-reliance. How timid he often is in the beginning of his career, but his daily contact with people soon develops self-reliance and overcomes the sensitiveness caused by self-consciousness. If he remains in that vocation very long he becomes so self-assertive that he is at the opposite extreme from where he was when he began. In this transformation he has been forced into doing things that were not pleasurable to him but that greatly adjusted his tendencies. In all mental adjustments it is necessary to do things that are often distasteful. It is necessary to follow the line of greatest resistance, but every achievement adds to the strength of character and thus the individual who makes the mental adjustments necessary in self-culture adds to his strength of character and is placed in a position where he becomes a reliable adviser for others.

Where there is a lack of caution and a tendency to take too many chances the individual should keep in an environment where he will be dealing with certainties and where the temptation will not be too great for taking risks. He should remember that the dangers are nearer to him than they appear, and that it is too late to be careful after the damage is done. A person who is excessively cautious is always magnifying difficulties through his imagination, and will worry about things that do not happen. Such a person should restrain

the tendency through reason and keep in an environment where he will not need to take responsibilities that will worry him.

If there is a tendency to be too positive and to hold too firmly to one's ideas when there is a difference of opinion between himself and others the individual should force himself to yield more readily to the judgment of friends than is natural to him. A person who is fond of stamping his individuality upon his work will find it difficult to take orders from others if they do not harmonize with his own ideas; such an individual should avoid a vocation in life that deprives him of freedom in using his individuality in planning and doing his work. Deficient firmness causes a person to be too pliable and to lack in self-assertion; hence where this is the trouble one should cultivate firmness by becoming more self-assertive.

Conscience is given to every person as a monitor, urging him to do right, and no one should permit himself to do anything that his conscience opposes. Conscience gives sincerity and honesty. When these factors are conspicuous in the personality they compensate for other weaknesses. One should be sure he is right, and then go ahead, regardless of what other people think. Emerson said, "To be a man you must be a non-conformist." Hence, if one's conscience goes contrary to established conditions these may be wrong and his conscience right. Insincerity is a common vice, that always detracts from the personality of anybody.

It is always better to be an optimist than a pessimist. It is not necessary to approve everything as it is, but it will be better for the individual and for humanity if a person have a hopeful vision of the future and will make an effort to change conditions from what they are to what they ought to be. It is often necessary to disturb the present in order to improve the future, but the more a person criticizes constructively the more helpful he will be in improving conditions, so that they will be more in harmony with his conscience and ideals. Where one is deficient in hope and is disposed to look on the dark side of things he should seek the society of persons who are optimistic, and read books that give the mental uplift.

The divine architect placed the brain center through which faith functions next to the one used by hope, and these two powers of the mind are very closely related in their functions. Until the things of this life and of eternity become knowledge

it is necessary to exercise faith in them. "Faith is the assurance of things hoped for, and the evidence of things not seen." Faith is generally exercised in connection with the phases of life termed spiritual, or religious. Much that was formerly hoped for through faith has now become a matter of knowledge through scientific investigation, and judging from the advancement that is being made at the present time it is reasonable to believe that the time will soon come when everything that is related to human life and welfare will be revealed by natural methods.

When the essential principles are thoroughly understood they will lay the foundation for a unity of faith in essentials pertaining to religion as well as to all other phases of life. If faith is normally expressed in an individual he is proving all things and holding fast to the good, giving to others the same privilege, and is exercising tolerance toward others no matter how far they are from him in their search for truths pertaining to human welfare in this life and in eternity. By doing this a person will exercise the third faculty in the trinity of virtues mentioned by the Apostle Paul: "Faith, Hope and Charity, but the greatest of these is Charity." These moral powers, connected with the intellectual tendencies, should rule in every person's character. The highest form of self-culture is impossible without the proper adjustment of these higher powers.

Reverence is not one of the strong faculties in the average American character. Where it is deficient in the organization of an individual he should endeavor to cultivate it by showing greater veneration for established customs and beliefs. If it is excessive in the development a person should study twentieth century problems and have the courage to help make the adjustments in present beliefs and practices that are necessary to adapt them to the needs of society. The work of the Psychic Research Societies throughout the world is to explore the wonders of nature that are recognized through intuition and that are intimately related to the progress and happiness of the race. Where these do not interest one it would be profitable for him to get in touch with the work of the most advanced thinkers and explorers in the realm of nature's finer forces, in order to awaken and develop these higher tendencies that are innate in each person.

The perfecting powers are the keys to the esthetic world, where an appreciation of the beauties of art and nature is

possible. If the constructing tendencies are deficient in the organization of an individual they can be cultivated through planning, mechanical construction, work in art, literature, and other related lines. If a person is too esthetic he should get in touch with the outer world more through the powers of observation. Science develops the intellectual powers, while the arts develop the emotional nature. To develop the balanced life both the intellect and the feelings should be cultivated. It is a mistake to begin specializing too early in life and to narrow the thoughts and activities into too limited a field. Charles Darwin, who devoted his entire life to observing nature, and was away from civilization much of his time, felt his limitations and losses when he gave utterance to the following:

If I had to live my life again, I would have made a rule to read some poetry and listen to some music at least once every week; for perhaps the parts of my brain now atrophied would thus have been kept active through use. The loss of these tastes is loss of happiness, and may possibly be injurious to the intellect, and more probably to the moral character, by enfeebling the emotional part of our nature.

If the faculty of sublimity is so strong in the organization that the person has a tendency to exaggerate and to use too many adjectives in the superlative degree, he should use his intellect to tone down this tendency. On the other hand, if there is such a deficiency in this power as to give no appreciation of the sublime, the grand and the wonderful in nature, the person should make a special effort to cultivate the tendency.

It is often said that poets are born and not made. This statement is true as far as genius is concerned, but every person is capable of cultivating ideality until there is an appreciation of the beauties in art and nature, and ability to express his impressions of them to a moderate degree at least.

Adaptation is one of the first essentials to success in dealing with people. The lack of this makes many a person unpopular and makes it unpleasant for those who are laboring with him. One should always tell the truth, but in such an agreeable way that it would not wound the feelings of his fellow beings. Where there is a lack of agreeableness and affability in the organization of an individual a determined effort should be made to cultivate these desirable tendencies. If a person is at the opposite extreme, and has a tendency to indulge in

palaver and gush, it will be to his advantage and to the comfort of the people with whom he associates if he will tone down this abnormal expression and not permit himself to use any exaggerated form in speaking to others. Not too much, and not too little, is the desirable condition here as elsewhere, and he who succeeds in reaching this medium will be in possession of some of the elements of success.

There are some people who have so little tendency to imitate others and who are so little affected by the approval and disapproval of other people that they are very unconventional. This is an advantage when it is necessary to depart from established conditions and to blaze the way along some new line, but in ordinary circumstances it is better for a person to have some regard for the feelings of others and not to depart too far from customs that are generally considered to be best for humanity. If there is a tendency to imitate other people in everything an individual attempts to do it will be well for him to cultivate more originality and to put more individuality into his work. If his methods of doing things are too different from the methods used by the large majority of people a person should be very sure that he is right before holding too firmly to his methods. It is best for an individual to adapt himself sufficiently to others to keep in touch with them so as to be able to influence their lives when it is necessary to do that.

The adjustments and conditions described above are in connection with the powers of mind that are usually classed as the subconscious and the superconscious. The happiness and success of each individual depends very largely upon his ability and inclination to harmonize these powers. In making the adjustments that are necessary much help can be obtained through the intellectual powers that are usually spoken of as the objective, or conscious, mind. The chief function of the intellectual powers is to gather facts and classify them, but in living the well balanced life it is necessary to use the intellectual powers and to keep the impulses that pertain to self-preservation and to social life under control of the intellectual and moral powers. In the education of the past the tendency has been to give too much attention to studies that appeal to the intellect and too little attention to the mischief-working impulses. The object of the education of the present and future should be to give proper attention to every power of the human organism, so as to insure normal expressions and

to avoid the discords that produce misery and failure. The intellectual processes receive so much consideration in the schools and colleges of today that it is unnecessary to give the details of their development here, but the importance of a right relationship between intellect and the other mental powers cannot be over-estimated. An intelligent knowledge of human nature as a whole is the best guide in harmonizing the powers of life in a way that is essential to self-culture. "Living the Radiant Life," by George Wharton James, is an inspirational book on self-culture that can be recommended and should be read by everybody.

CHAPTER XV

MEMORY TRAINING

During recent years many systems of memory training of more or less merit have been placed upon the market. Some of these explain the fundamental principles of mind and body training that result in improvement of the memory and other powers of the intellect. Some systems of memory training are very artificial, and merely teach the mind to play tricks. These do not aid the memory in the practical work of life and are not to be recommended. The first essential in memory training is to keep the whole organism in as good health as possible. M. L. Holbrook, M. D., in his excellent little book, "How to Strengthen the Memory; or, Natural and Scientific Methods of Never Forgetting," says on page 19:

Robust health is the best foundation upon which a good memory may be built. I do not mean that all healthy persons have good memories, but that persons with good health, other things being equal, will remember more than those who are in a low physical condition.

A good memory cannot be preserved with an impaired nervous system. Not only may a long-continued wakefulness change the temper of a mild and gentle person, completely alter his features and expression and occasion a development of singular and most uncomfortable whims, but also cause great deviation in the powers of intellect and imagination, and ruin the ability to recall facts and ideas.

Intense interest, which results in the concentration of the mental powers and in giving strict attention, is the first condition of a good memory. This condition is dependent upon will power and discipline, as well as upon a healthy condition of the body. Orators and actors usually have good memories. When actors are required to commit to memory long parts in a play they cultivate what is usually spoken of as a verbal memory, so that they often learn in a short time what would be difficult for most people to commit to memory in a much longer time. When the memory plays an important part in the work of individuals it is often greatly handicapped through the exhausted condition of the body. A practical illustration of

this is given by Mr. G. J. Holyoke, in a little work of his on oratory :

When traveling expenses were the only thing that I received for my lectures, I used to walk to the place of their delivery. On my walk from Birmingham to Worcester, a distance of 26 miles, it was my custom to recite on the way portions of my intended address. In the first part of my walk my voice was clear and my memory was good; but towards the end I could scarcely articulate or remember the thread of my discourse. If I lectured the same evening, as sometimes happened, I spoke without connection and produced little effect upon my audience. The reason was that I had exhausted my strength and paralyzed my memory. One Saturday I walked from Sheffield to Huddersfield to deliver two lectures. It was my first appearance there, and I was anxious to make a good impression; but in the morning I was unable to do more than talk half inaudibly and incoherently. In the evening I was tolerable, but my voice and memory were weak. My annoyance was excessive. I was a paradox to myself. My power seemed to come and go by some eccentric power of its own. I did not find out until some years after, that exhaustion of my strength had exhausted my powers of speech, thought, and memory, and that entire repose instead of entire fatigue should have been the preparation for public speaking.

The following analysis and definition of memory is taken from the work of Prof. O. S. Fowler, entitled "*Memory, and Intellectual Improvement Applied to Self-Education and Juvenile Instruction.*" It explains what is usually not understood, that memory is not a single faculty, but that each one of the intellectual powers has a memory :

Memory recalls past occurrences, doings, acquisitions of knowledge, etc. It is not, however, a single faculty, else men could remember everything past equally well, which is not the case; but every intellectual faculty recollects its own functions. Thus locality remembers places; form, shape; eventuality, events and actions in general; causality, ideas, principles; and thus of all the intellectual powers. Hence, there are as many different kinds of memory as there are intellectual faculties; the greater energy of some of which and the feebleness of others, both in the same head and in different persons, cause and account for the fact that some can remember faces, yet forget names, while others remember places almost by intuition, yet forget items. This diversity in the memory of men precludes the idea that memory is a single faculty. But there being as many different kinds of memory as there are intellectual organs, the retentiveness of each of which increases and decreases with the energy of its organ, of course he who has causality large and language small easily remembers the substance, but forgets the words; and thus of the different degrees of strength in all the other faculties.

Hence the full development and vigorous action of all the intellectual powers gives a retentive memory of everything. Nor can a retentive memory of everything be secured by any other means. The cultivation of the memory, therefore, and the discipline of the mind amount to one and

the same thing, and are to be effected by the same instrumentalities. To strengthen the memory is to augment the intellectual capability, because both consist in enhancing the intellectual energies. Memory, in common with every mental faculty and physical function, can be strengthened to a degree almost incredible.

The influence of the quality and circulation of the blood upon the activity of memory is clearly shown in the following quotation taken from "Diseases of the Memory," by Th. Ribot:

Fever in its various stages is accompanied by extreme activity of the brain. In this activity the memory takes part. We know that in fever the rapidity of the circulation of the blood is excessive; that this fluid is altered from its normal state and charged with the waste product arising from rapid combustion. In this state persons often remember impressions of trivial things, in which no interest was taken, while, perhaps, more important impressions are forgotten. It will generally be found that such impressions were received when the energies were high; when exercise or pleasure, or both, had raised the action of the heart. We may note, also, the ease and rapidity with which we remember at that period of life when the blood is driven through the vessels in plentiful and swift-moving streams, and how difficult it is to remember when the circulation of the blood diminishes with advancing years. It is also well known that in the latter part of life the composition of the blood is changed, and it is less rich in red corpuscles and albumen. When this is exhausted by long illness memory is enfeebled with the circulation.

There are many interesting cases of remarkable memory for one thing, with only ordinary memory for all other things, such as the memory of tunes possessed by Blind Tom; the memory of numbers which was shown in a remarkable degree by Zerah Colburn, Jedediah Buxton, George Bidder, and others. Some have a strong memory for names of persons, others are endowed with a memory that enables them to remember places with remarkable accuracy. Such pronounced developments indicate genius for one thing only, rather than the all-round development that gives versatility and adaptability. The genius can entertain people who are interested in his particular line, but is at a loss in considering subjects that are foreign to his special line. The world needs geniuses to pioneer along new lines, and to invent things that contribute to the success and happiness of mankind, but on the whole the most desirable organization shows a medium development of all the memories. In memory, as in all the other powers of mind, everybody is deficient in some respects and strong in others. It is stated that Hogarth, who was one of the intellec-

tual men of his time, was so weak in verbal memory that he could not commit to it two successive lines of verse. George Combe, the noted philosopher and phrenologist, was one of the best thinkers of his time, and Horace Mann said of him that in the twentieth century he would be looked upon as the greatest man of the nineteenth; yet he was so deficient in the faculty of number that he could never learn the multiplication table. As a contrast to this deficiency Sir William Hamilton mentions the case of a Corsican who could repeat 36,000 names after once hearing them, but, says Gregorovius, from whom he takes his information, "He produced nothing; his memory had killed all his creative power. It is with the precious gifts of memory as with every other gift; they are the curse of the gods, when they give too much."

The result of brain injury upon memory has long been a problem of great interest. An interesting account of this is given by Dr. Andrew Wilson, in an essay on the result of brain injury. He says:

In cases of head injury involving loss of consciousness, the patient, on recovery, recollects the details of his past life, save those which concern a short time before the accident. The period immediately preceding the accident remains a blank in the memory. There is a perfect recollection of every event up to within a certain period before the accident. Of the events of this period, the patient on recovery can remember nothing. A man falls down a deep well, sustains severe concussion of the brain, and on recovery is amazed at the loss of memory for events occurring just before his accident. "He actually makes guesses at his proceedings, but fails to explain to his own satisfaction, or that of anybody else, what he was doing to the well and its rope." A lawyer, after concluding an intricate piece of business, goes for a ride on the sands. He is thrown from his horse, and sustains brain concussion. After his recovery, he can recollect nothing whatever of the business in question, although his memory for events long prior to the accident is as good as ever. The "lost hour" in such cases is that just before the accident. That it is, which is the unwritten part of the mental slate, or, rather, the part of the mental slate the writing on which has been blurred, obscured or rubbed out altogether.

It becomes evident that in the details of such curious results of brain injury and of loss of memory, we should find some clue to the nature of the memory processes. The expression concerning a thought being "driven out of one's head" would appear to possess an actual parallel in the history of the physical accompaniments or basis of memory. The inferences which may be drawn from such cases are clear enough. As Mr. Bell has pointed out, in the act of what is named "memory" there are at least two distinct processes involved. There must be a reception or recording by the brain-cells of the brain of the impression made upon the organs of sense.

It would seem to be a matter of tolerable certainty that each impression

made upon the brain centers, requires for its repetition and preservation, a certain period of time. The cases of brain concussion we have studied prove this. As the sensitive plate of the photographer requires a certain period of exposure for the reception of the image, and as a still further period is necessary for the fixation of the image thereon, so the nervous mechanism demands a certain period for the fixation of the impressions which are to do duty in the "memories" of the future. As Mr. Savory puts it, the mental ink must have time to dry. Any blurring, resulting from concussion, will render the after-production of the impressions which we name "memory," imperfect, feeble, or it may be, altogether impossible.

In the training of memory, as in the developing of muscle, one of the first essentials is use. The law of association is now generally recognized as an important factor in memory training. It is important that every parent and teacher have an acquaintance with the fundamental principles of memory training, in order to unfold and develop the powers of the child mind in a natural manner, and where a deficiency is found a special effort should be made to overcome it. All children should be trained in the habits of close attention, careful observation and reflection, methodical association, and regular exercise of the intellectual powers.

On self-culture of memory Dr. Holbrook gives the following valuable advice to adults in his book, "How to Strengthen the Memory," page 67:

It is often the case that persons who have passed the age for attending school, or persons whose early advantages for study were limited, have a hungering and thirsting for knowledge, and a strong desire to improve their intellectual nature by taking advantage of such leisure as they may have at their disposal. The number of these persons is large, and notwithstanding our educational facilities, always must be. There is no more hopeful sign of human progress than that which we see in the efforts of individuals, busy much of the day with their vocations, spending their leisure in self-culture rather than in low social and convivial pleasures. This class of students would make greater progress by first developing their memories so as to make their minds more retentive and capable of retaining any desirable mental acquirement. The perplexing and inexorable cares of daily life in some degree blunt the faculties for retaining knowledge, therefore they will need special culture to keep them in good condition.

I counsel such persons to begin by learning poetry so that it can be accurately repeated. The memory is strengthened more easily and quickly by this method than by learning prose. After a while easy prose sentences should be tried; then lectures and discourses, and, finally, more difficult scientific works.

Every day, the student in this department of mental culture should master something which he can repeat correctly; it may be very little, but

let it be something. He may begin with a few words and increase his task, if only one line each day. In a short time it will become sufficient without any further increase, and make his daily lesson quite enough for his strength.

Committing to memory takes place most rapidly when it is done in silence; but if other thoughts press in on the brain, a low voice aids the student in holding his mind to its work. The two-fold mental action, that of hearing and speaking at the same time, assists to arouse the slumbering faculties, though the voice be only a whisper.

One should frequently test himself to see whether that which he has gone over is really acquired or only comprehended, and that which has been lost should again be impressed on the mind.

It is not to be expected that in exercising the memory one shall have the time, or be able to memorize everything; but it is necessary to do this in the beginning, and always on a few things, and this is especially desirable for the young. Learning accurately every word is a very useful exercise for those who have weak memories.

It is important that the memory student understands thoroughly what he undertakes to retain in his mind. What is not understood is soon lost; what is thoroughly understood is not easily forgotten.

The most suitable time to cultivate the memory is in the evening, when the light is low, and the mind not readily drawn off by other thoughts, or in the early morning, soon after awakening, and after the morning bath, when the intellectual faculties are fresh. Cato and Cicero practiced on this plan and strengthened their memories by repeating, either in the evening or the following morning, the events of the preceding day.

The memory should be exercised at regular periods of time; but these periods should not be too far apart nor of too long duration, nor should they be too frequent. The danger in violating these rules is, that the mind becomes confused and the things to be remembered entangled one with another.

To remember a series of things most easily and correctly, they should be very carefully arranged in the mind, and their natural connection with each other be made as perfect as possible. In this way the one suggests the other, and the whole can be taken in, as it were, at one glance.

Things that are difficult to fix in the mind we may look at in connection with some external sign, as a line under the word or sentence, a note on the margin of the page, written with a red, green or black pencil, and a special kind of fact associated with a particular color, and thought of in connection with it. Sometimes we may remember a difficult thing by picturing in the mind's eye the first letter, syllable or word, or, if there are several things, by connecting the first letter of each sentence into a word, or the first word into a sentence, and committing this to memory.

There are many remarkable cases of memory bringing to individuals during the hours of sleep things that they were unable to recall during their waking hours. A very interesting case of this kind is given by Mrs. Agassiz, in the life of her husband, the celebrated naturalist, Louis Agassiz:

He (Agassiz) had been for two weeks striving to decipher the somewhat obscure impression of a fossil fish on the stone slab in which it was preserved. Weary and perplexed he put his work aside at last, and tried to dismiss it from his mind. Shortly after, he one night awoke persuaded that while asleep he had seen his fish with all the missing features perfectly restored. But when he tried to hold and make fast the image, it escaped him. Nevertheless, he went early to the Jardin des Plantes, thinking that on looking anew at the impression he should see something which would put him on the track of his vision. In vain—the blurred record was as blank as ever. The next night he saw the fish again, but with no satisfactory result. When he awoke it disappeared from his memory as before. Hoping that his experience might be repeated on the third night, he placed a pencil and paper beside his bed before going to sleep. Accordingly, toward morning, the fish reappeared in his dream, confusedly at first, but, at last, with such distinctness that he had no longer doubt as to its zoological characters. Still half dreaming, in perfect darkness, he traced these characters on the sheet of paper at the bedside. In the morning, he was surprised to see in his nocturnal sketch features which he thought it impossible the fossil itself should reveal. He hastened to the Jardin des Plantes, and, with his drawing as a guide, succeeded in chiseling away the surface of the stone under which portions of the fish proved to be hidden. When wholly exposed, it corresponded with his dream and his drawing, and he succeeded in classifying it with ease. He often spoke of this as a good illustration of the well-known fact that when the body is at rest the tired brain will do the work it refused before.

There is no doubt that the memory can be greatly improved, but there are a great many different opinions regarding the best methods of improving it. The defects in many of the artificial methods of memory training that are on the market lie in the fact that they do not make the mind as a whole attentive and retentive, but that they serve to impress a few particular subjects on the mind. The condition of the memory depends to a very great extent on the daily use that is made of it, upon the attention and interest centered upon the thing to be remembered, and upon the manner in which the ideas are arranged or associated. Dr. Noah Porter, in writing upon this subject, says:

The natural as opposed to the artificial memory depends on the relations of sense and the relations of thought,—the spontaneous memory of the eye and the ear availing itself of the obvious conjunctions of objects which are furnished by space and time, and the rational memory of those higher combinations which the rational faculties superinduce upon those lower. The artificial memory proposes to substitute for the natural and necessary relations under which all objects must present and arrange themselves, an entirely new set of relations that are purely arbitrary and mechanical, which excite little or no other interest than tasks itself to the special effort of considering objects under these artificial relations, it

will give less attention to those which have a direct and legitimate interest for itself.

Halleck offers many valuable suggestions on memory training, from which we quote the following:

The student ought not to be disappointed to find that memory is no exception to the rule of improvement by proper methodical and long continued exercise. There is no royal road, no short cut, to the improvement of either mind or muscle. But the student who follows the rules which psychology has laid down may know that he is walking in the shortest path, and not wandering aimlessly about. Using these rules, he will advance much faster than those without chart, compass, or pilot. He will find mnemonics of extremely limited use. Improvement comes by orderly steps. Methods that dazzle at first sight never give solid results.

Haziness of perception lies at the root of many a bad memory. If perception is definite, the first step has been taken toward insuring a good memory. If the first impression is vivid, its effect upon the brain cells is more lasting. All persons ought to practice their visualizing power. This will react upon perception and make it more definite. Visualizing will also form a brain habit of remembering things pictorially, and hence more exactly.

Whenever we can discover any relation between facts, it is far easier to remember them. The intelligent law of memory may be summed up in these words: Endeavor to link by some thought relation each new mental acquisition to an old one. Bind new facts to other facts by relations of similarity, cause and effect, whole and part, or by any logical relation, and we shall find that when an idea occurs to us, a host of related ideas will flow into the mind. If we wish to prepare a speech or write an article on any subject, pertinent illustrations will suggest themselves. The person whose memory is merely contiguous will wonder how we think of them.

In memory training, as in vocational guidance, order and classification are two chief essentials. The ten thousand vocations necessary in doing the world's work can be so classified that it is possible to connect any one of the seventeen hundred million people in the world to the vocation for which he is best adapted. In the same way, by properly classifying the things that are to be remembered, it is possible to retain and recall a large number of them without overtaxing the mind. Memory training systems are not a creation of the twentieth century. It is recorded that the ancient Greeks were fond of memory systems. Simonides, the Greek poet, who lived about 500 B. C., is quoted as the author of a system, and it is said that his work influenced nearly all of the memory systems that have been developed since that time.

The verbal memory is naturally much stronger in children

than in adults, and the logical memory stronger in adults than in children. Unless it is necessary to commit anything to memory word for word it is much better to get the facts and express them in one's own way. Persons who have passed the zenith of life should not be alarmed if the verbal memory does not respond as readily as it did in childhood, but should continue to make accurate observations and pursue the studies that will insure healthy activity to the memory of names, forms, dates, numbers, relationships, color, words, places and other things that are necessary in every day activities. A study of the principles of character analysis gives a knowledge of all the fundamental powers of mind that will aid in making the mental adjustments necessary for the proper expression and relationship of memory, and of all the other powers of mind. The suggestions that have been made by reliable authors quoted in this chapter will be helpful to any who desire to cultivate memory. It is not possible to neglect a normal expression of memory for years and then find some artificial system of memory training that will immediately restore it to its normal condition. There are many people who violate the laws of health culture until they bring upon themselves chronic ailments, and then hope to find some magical drug that will immediately relieve them of their troubles. Their only hope is in yielding obedience to the principles of health, and in using rational methods of cure that will gradually train them back to health and will restore normal conditions in the organs of the body. In memory training, as in health culture, the ounce of prevention is much better than the pound of cure, and is more pleasant to take. When correct methods are used in the home and school in developing the powers of children, and correct habits of thinking are permanently established, there will be no further demand for systems of memory training that are prepared for the dollars they will bring those who exploit them, rather than for any help that they will give those who purchase them.

CHAPTER XVI

CHILD CULTURE

The success of every child depends upon the inheritance with which it begins life, upon the environments in which it is placed, and upon the development of its will power in controlling the various tendencies of its life. The problem of child culture is closely related to the life of every citizen, especially where the child is educated by public funds that are contributed to by everybody through the additional price that is placed upon food, clothing and shelter when no other tax is paid. Thus if a child is brought up in the right way to become a useful citizen and to contribute to the essential work of the world the result is a self-supporting member of society. On the other hand, if a child's inheritance and environments are bad and his will power is not cultivated so that he is able to control himself he becomes a burden by requiring the services of people and institutions that are kept up at a great expense to society.

In some of the larger cities of America the schools have employed home teachers and when these are trained to render their best service to the people they will be able to go into the homes where there are difficult children and help the parents to make mental adjustments in themselves and their children that will result in harmony, thus making it unnecessary later on to have probation officers, juvenile courts and reform schools to take care of the children. The remedy for juvenile delinquency lies in the prevention of it, and when society develops as much skill in detecting discords in children and in perfecting methods to correct them as it has developed in detecting criminals after they have spent years in cultivating abnormal tendencies and committing acts that are known to be harmful to society, there will be much less need for prisons and reformatories than at the present time.

Where children have very pronounced discords it is possible to detect them during the first year or two of life. Without any knowledge of technical psychology parents are able to see

stubbornness, temper, quarrelsomeness, theft, sensitiveness, and other abnormal tendencies in their children, but often they do not know how to correct these tendencies, thus permitting the evil to go on year after year until there is a badly adjusted condition of mind and an unbalanced brain has been developed. During twenty-five years of professional work the writer has studied many thousand difficult children and has given advice to parents in overcoming the discordant conditions in the lives of their children. In one of the towns of western America a father and mother sought help in training a little girl who had such an ungovernable temper that they felt unable to control it. They were advised to keep other children from teasing the girl, and not to let anything happen that would arouse the temper of the child. The suggestions appealed to them and they united in their efforts to protect their child from anything that would arouse temper. Two years later, in visiting the same town, the mother volunteered the information that the girl seldom became angry, and had almost entirely conquered the temper. If a severe case like that one can be adjusted in two years, milder cases might be controlled in much less time by removing causes. The teasing habit is one of the most common causes of irritable natures and ungovernable tempers. In many instances parents tease their own children until anger is aroused and permanent damage done. A prominent kindergartner, being acquainted with the bad effects of teasing, stated that anybody who could go throughout the country and stamp out the teasing habit would render one of the greatest services in child culture that could possibly be given. If as great an effort were made to abolish this habit in the home, school and society as is given to some other educational subjects it would be possible to make a very radical change and to overcome one conspicuous cause of human discords. The writer has included in his talks to children, given in the schools of hundreds of cities of America, the bad effects of the teasing habit. The response that has come from the children to whom the appeal was made is evidence of the possibility of doing very effective work. In one community a mother came for help for some of her children after the lecture, and when she was advised to protect one of the little girls from the teasing habit because of the abnormally strong development of the energy centers that always exploded in anger she said that the only thing that brought discord into their home was the constant teasing of the young-

er children by the oldest boy in the family. She knew the bad effects of it, and tried to stop him by saying "don't," until he thought his name was "don't." She said it had very little effect on him, but after he had listened to the little talk on the evils of teasing he went home and of his own accord said to his mother: "Mother, I am not going to tease the children any more." In relating the occurrence the mother said it was the most welcome news he could have brought to her. It is not likely that a single talk will always make the necessary corrections, but the subject is of sufficient importance to demand more than a single effort. All of the powers can be more easily adjusted through reason, benevolence and conscience than by the methods that are usually used.

In applying the principles of character analysis in the study of children it is not for the purpose of vocational guidance, but to make the mental adjustments which will restrain tendencies that are excessively developed and cultivate those that are deficient, in order to produce harmony. If there is a great difference in the developments of the intellectual powers the result will be genius, but the unbalanced condition of the feelings does not produce the same results. Juvenile delinquency is not caused so much by a lack of balance of the intellectual powers as of the passions and desires. The most common discords in the characters of delinquents are stubbornness, temper, quarrelsomeness, theft, deceitfulness, and, later on, a perversion of the sex instinct. All the abnormal acts of all the children come through the misuse of good powers whose normal function is to produce harmony, happiness and success. When these powers are trained to function normally in all the children of all the people there will be no further need of juvenile courts and reform schools, and when the same powers function normally in every adult there will be no need for prisons, penitentiaries, insane asylums, poor-houses, and other institutions that are now evidences of the imperfect methods that prevail in the development of human lives. To make the personal and social adjustments that will bring about these ideal conditions is the task that is before humanity, and much progress toward that end must be made during the present century. In making these adjustments it is necessary to begin earlier than is customary. The best foundation to begin from now is to give the right inheritance to every child that is born, through the proper adaptation of the man and the woman who become its parents. The

next step is to apply the principles of child study from the earliest period of child life, that its faculties may be aroused in their normal order and properly directed. From the beginning an effort should be made to develop power in each individual to control from within, while the necessary aid is given by the environments provided in the home, the school and the community. Much intelligent work is being done along these lines, but much more is needed. There is still too much truth in the criticism of our educational system offered by Herbert Spencer during the latter half of the past century, when he said:

If, by some strange chance, not a vestige of us descended to the remote future save a pile of our school-books or some college examination papers, we may imagine how puzzled an antiquary of the period would be on finding in them no indication that the learners were ever likely to be parents. "This must have been the curriculum for their celibates," we may fancy him concluding. "I perceive here an elaborate preparation for many things: especially for reading the books of extinct nations and of coexisting nations (from which, indeed, it seems clear that these people had little worth reading in their own tongue); but I find no reference whatever to the bringing up of children. They could not have been so absurd as to omit all training for this gravest of responsibilities. Evidently, then, this must have been the school course of one of their monastic orders."

In training the intellect the schools put children into a position to glean the best information from all sources, but often the inclination is lacking and the ability thus acquired is devoted to less worthy efforts. There are some people who imagine that all juvenile delinquency can be cured or prevented by giving more intellectual training to children, but it is evident that America's greatest educator, Horace Mann, did not believe that when he gave utterance to the following:

When I look back to the playmates of my childhood; when I remember the acquaintance which I formed with nine college classes; when I cast my eye over the circles of men with whom professional and public duties made me conversant; I find amongst all these examples, that, for one man who has been ruined for want of intellect or attainment, hundreds have perished for want of morals. And yet, with this disproportion between the causes of human ruin, we go on, bestowing at least a hundred times more care and pain and cost in the education of the intellect, than in the cultivation of the moral sentiments, and in the establishment of moral principles. From year to year we pursue the same course of navigation, with all these treasure-laden vessels going down to destruction around us and before us, when, if the ocean in which they are sunk were not fathomless and bottomless, the wrecks ere this would have filled it solid to the surface.

Many children begin the battles of life with such strong impulses that it requires a greater effort than they are capable of under the ordinary environment to control the appetites and passions. This condition must be corrected by giving a better inheritance to children and then furnishing the environments that will reduce the temptations to misuse any of the powers of life. In speaking of the importance of right inheritance George E. Dawson, Ph. D., Professor of Psychology at the Hartford School of Religious Pedagogy, says on page 65 of his book, "The Right of the Child to be Well Born":

Shall it be said that, in advocating standards of biological fitness for parenthood, we are in danger of reducing courtship and marriage to terms of calculating selfishness? This is often advanced as an argument against the science of eugenics. No line of reasoning could be more superficial. A standard of biological fitness for marriage and parenthood is nature's standard; and, as already stated, sexual selection from the beginning has implicitly adopted this standard. How else could the race have survived? The science of eugenics merely does, what it is the function of all science to do, renders explicit and rational the processes of nature. To say that the men and women of civilization should choose their mates according to their biological fitness for parenthood, is to say no more than that the great instincts and feelings that impel to marriage, should be rationalized and directed according to the standards of modern knowledge. This is precisely what every instinctive process is increasingly subjected to in the progress of civilization. The individual or community in civilization that cannot meet this condition of advancement is clearly unfit for a place in the vast program of racial life.

From the point of view of social morality a marriage license and the words of a clergyman or officer of the law may moralize the sexual relations of men and women. Not so from the point of view of biological morality. Here the moral quality lies in the parental purpose and results of such relations. Throughout the whole range of animal life below man, the union of the sexes is strictly subordinated to the propagation of life. The females of the species limit their choice of mates according to conditions that best perpetuate their kind. Conjugal relations and parental ends are thus never divorced. This is one of the primary factors in the moral economy of nature. Man is the only animal that has disturbed this moral order in the fundamental processes of life, and made the union of the sexes an end in itself. He is the only creature that has deprived his mate of the power of choice in sexual relations, and has built up laws and institutions that legalize the tyranny of his own lusts. Here is a source of immorality as yet little considered. From it has sprung the sex-slavery of women throughout the ages, with all its incidental concubinage and prostitution. And yet, however far men may thus have departed from the standards of biological morality, and however much the primary ends of life may have been defeated, the hope of future racial regeneration lies in the reinstatement of parental functions as the center of all relations between the sexes. Eugenic idealism can give no sanction to a system of morality that permits a divorcement between conjugal and parental functions. Marriage and the sexual relations of men and

women have no warrant in nature, whatever may be the case in custom and law, except as a means for the propagation and rearing of offspring.

In another chapter of this book the proper adaptations in wedlock will be outlined. The subject is mentioned here merely to show that children are robbed of their birthright whenever parents are not properly adapted to each other for the purpose of giving the right inheritance to their offspring. When inheritance has done all it can for the child then it is important that parents be familiar with the elementary principles of practical psychology, in order to always make the right appeal in developing and harmonizing the powers. Prof. N. N. Riddell, in his book, "Child Culture," page 47, shows the results of training in many homes when there is a lack of knowledge of child nature on the part of parents. We quote the following:

Parents who do not understand the laws of psychology frequently develop most undesirable traits in their children. They appeal to or govern them through their appetites and propensities; with the result that they develop the animal instead of the man. To illustrate:

Mrs. A gets her boy to do what she wants him to by promising him a doughnut or some candy; Mrs. B hires her boy to do right; Mrs. C threatens to punish her boy if he does not do right, and Mrs. D appeals to pride and tells her child how everybody will approve of his act. The results are that each secures conduct from an unworthy motive; and since every time we exercise a power we strengthen it, Mrs. A's boy becomes perverted in his appetites and refuses to do anything unless he can have something to eat; Mrs. B's boy develops the commercial instinct to a point where he becomes so selfish that he will not do anything unless he is doubly paid for it; Mrs. C's boy lives under constant fear and develops as a coward, will not act unless driven, but can be compelled to do anything right or wrong; Mrs. D's child develops a pompous pride and has no conscience beyond the approval of others. Each becomes a monster in his way. In all, action springs from an unworthy motive. The mothers wonder why their once good little boys have become so selfish, willful, and ungovernable.

The way is very apparent to the psychologist. The continual excitation of the propensities to the neglect of the intellect, the conscience, and the sense of duty, has developed the former so far in excess of the latter as to make them the ruling elements in the character.

The wise parent never governs a child through its appetites or propensities, nor appeals to its baser nature when he wants conduct. Children that are governed through their appetites in infancy are usually governed by their appetites in maturity. Children whose every act of obedience is obtained by an appeal to some selfish motive become preeminently selfish in mature years and not infrequently lapse into crime. The appetites and propensities should be carefully guided and made subservient to the will and intellect in every child, but under no circumstance should they be

made the basis of conduct. In the animal they rule, but in man they should serve.

In child training it is necessary to understand the same principles of character analysis, or practical psychology, that are required in self-culture, in vocational guidance, or in any other phase of human endeavor. Very early in the child's life its external developments reveal the proportionate activity of the powers of mind and the organs of the body. The tendencies that are shown to be only medium in development and activity do not require special attention. Excessive developments and deficiencies require adjusting in order to secure the desired harmony in the life of the child. The pronounced developments of the different brain centers that are always found when certain tendencies are out of proportion with the rest make it easy for parents and teachers to learn enough about human nature to observe and adjust the most pronounced tendencies of children. Observing tendencies is similar to diagnosing disease, but in modifying these tendencies a different remedy is required in each instance to harmonize with the organization just as it is necessary to take into consideration the constitution in case of sickness to make the adjustments and apply the remedies that will produce health.

The Parent-Teachers' Associations, Parents' Classes, Mothers' Clubs, and other organizations that have been established for the purpose of studying and training children will find it to their advantage to consider first the principles of child study before discussing the various methods of training children. As no two children are organized alike there is need for a careful study of each child before suggesting the methods that should be used in making changes that are desired. In some homes where there are a number of children, each constituted differently from the rest, parents discover the necessity of using a different method of appeal and direction for each one. Dr. Karl G. Maeser, who was one of the most successful teachers of the past century, said: "In order to treat all children alike we must treat them differently." This seems paradoxical, but it is true that if we want to be impartial with children we must treat them in harmony with their organizations, and not try to fit one method to all of them.

In Kindergarten and in the Montessori schools an effort is made to unfold the powers of children in a normal way and

to give them all as much freedom as possible in developing their individuality. This is a good idea if it is not carried to the extreme, but if children have a very strong bias and gratify that from the earliest period of life they are likely to become very one-sided in development and very limited in their views on many things that they will have to meet in every day life. In these organizations founded by Froebel and Madame Montessori there is also opportunity for directing the social nature. When children impose on each other they come before the principal, who says to them: "Do you think it is right to treat your neighbor that way?" Such children are appealed to through reason, the sense of justice, and benevolence, until changes occur that result in more friendly relationships. If these methods were continued in the home, as well as in the schools and colleges, the social and domestic affections would be harmonized much more than they usually are and there would be much more domestic and social happiness than there is in the world today.

In child training it is much more important that the parent or teacher set an example that is worthy of imitation than it is to tell the child what it ought to do. Children are great imitators, are quick to observe, and are much more influenced by what others do than by what they say. Most persons fail to give children credit for all the ability they have in analyzing character. If a child goes to a new teacher and makes observations in the school for half a day, when it returns to its home and the mother asks: "What do you think of your teacher?" the child will spend fifteen minutes or longer in telling all about the new teacher, if it has good perceptive and descriptive ability, and it is remarkable how near the truth the child is in its analysis of the teacher. It is unfortunate that this talent is not taken advantage of and the training in practical psychology, or human nature, is not continued in our schools in connection with the study of plants and animals and other phenomena. The ordinary psychology is too technical to introduce into the grammar schools or even in the lower classes of the high schools, but the principles of mind analysis and character building can be so simplified as to be easily understood by children six years of age and upward. There is no other study that will do as much to harmonize the powers of children and help them to become self-controlling and useful citizens as the study of human nature. Horace Mann understood this fact when he predicted that

education would solve the problems of vice, crime, disease, poverty, and other social evils. The reason why his prediction was not fulfilled since almost every citizen has an opportunity of receiving a certain amount of education is because the practical psychology upon which Horace Mann built his entire educational system has not been continued or generally introduced into the schools. Right inheritance is the first essential in the improvement of the race, and the second is, to apply the principles of character building from the earliest period of the child's life. These principles are found in the scientific study of mind and body. It is impossible to develop any one system or set of principles that apply to the various individualities found in homes and schools. Each child is a law unto itself, and requires methods of training adapted to its own peculiar combination of tendencies. If a small fraction of the time that is now devoted to technical psychology in the normal schools were devoted to teaching to all the children in the schools the elementary principles of self-analysis the information would be of the greatest value to each in making the adjustments that would result in a more perfect life and a more harmonious development. With this knowledge of self, young people would be equipped to make a more intelligent choice of vocation when the time comes for them to decide what they ought to do as a life's work. In the high school this instruction could be given more in detail in connection with the information on genetics that should form a part of every citizen's education. Such instruction should include information on proper adaptation in wedlock, so that when young people become home-makers they will do so intelligently and will produce homes where peace, love, harmony and unity abound. The advantages gained by such an education are a valuable asset, not only to the ones who receive it now, but to future generations. Those who have the responsibility of training children can get much valuable information from a book written by N. N. Riddell, entitled "Child Culture," and from "Physiological and Moral Management of Infancy," by Andrew Combe, M. D.

CHAPTER XVII

VOCATIONAL GUIDANCE

The problem of placing young people in the vocations to which they are best adapted is one that has perplexed thoughtful people for many centuries. It is stated that Cicero sent his son to Athens and placed him under the care of Chrysippus, who was one of the greatest philosophers of the age, but history informs us that this boy was incapable of improving even under the instruction of such an able teacher. In view of this fact, Cicero proposed that there should be triers, or examiners, appointed by the state to inspect the genius of every boy, and to allot him the part that is most suitable to his natural talent. It is remarkable that it required two thousand years for the educational world to adjust its machinery to supply a need that appeared so evident to the best thinkers of ancient times.

In 1712, Addison said in the "Spectator":

Nothing is more usual than to see forty or fifty boys of several ages, temperaments and inclinations, ranged together in the same class, employed upon the same authors, and enjoined the same tasks. Whatever their natural genius may be, they are all to be made poets, historians, and orators alike. They are all obliged to have the same capacity, to bring the same couplet, or verse, and to furnish out the same portion of prose. Every boy is bound to have as good a memory as the captain of the form. Instead of adapting studies to the particular genius of the youth, we expect from a young man that he should adapt his genius to the studies.

In commenting on this quotation, in his little book on "Temperament in Education," Jerome Allen, Ph. D., says:

Could anything be more applicable to our condition today? Addison suggests that it would be well to examine pupils under the inspection of teachers, in reference to their capacities, and temperaments, and make such a distribution of them, into proper classes and divisions, as their genius qualifies them for. Here Addison was as wise as Cicero.

In the first half of the nineteenth century Horace Mann, America's greatest educator, said:

If I had only one dollar in the world I would spend it with a good phrenologist to know what I ought to do.

About seventy-five years have elapsed since Horace Mann made this remark. Millions of people have paid that dollar and, in many instances, much more, in order to get help in choosing a vocation. Finally the public schools have made it a part of the educational system of America to give vocational guidance to the boys and girls. In Bulletin No. 19, issued by the United States Bureau of Education, there is a letter of transmittal to the Secretary of the Interior, from the Commissioner of Education, in which he says:

American democratic ideals demand not only that all should have as nearly as possible equal opportunity for education, but also that all men and women should be employed in that form of work by which they may contribute most to their own happiness and to the common good. In our complex industrial and economic life, it is little less wasteful to leave boys and girls without assistance and guidance in selecting their occupations and finding employment than it would be to leave them unaided in obtaining education. Both are necessary for the highest good.

The essentials in vocational guidance are, to know the tendencies, talents and adaptabilities of persons, and the demands of the vocations. Some persons are built for work requiring strength and endurance, others for work requiring speed and fine adjustment, and there are vocations that require these various characteristics. The principles of vocational guidance have long been applied with animals. No intelligent person who knows anything about horse nature would use a 2000-pound Clydesdale for service in a carriage, under the saddle, or on the race course; neither would he advise using a trim built Hambletonian weighing seven or eight hundred pounds in a heavy dray, but the traveling horse would give good service in the light work to which he is adapted and the heavy dray horse would excel in the work adapted to its organization. The problem of vocational guidance is to put Hambletonian people into Hambletonian jobs, and Clydesdale people into Clydesdale jobs. Those who have undertaken to give vocational guidance all agree quite well on ideals and aims, but there is a great diversity of opinion regarding the methods of measuring individuals. One of the great needs of the present time is for all workers in this field who claim to do scientific work to get together and work out a system of character analysis or practical psychology that will supply

the needs of all vocational advisers. The following suggestions of Hugo Muensterberg, who for years was Professor of Psychology in Harvard University, expresses the sentiment of intelligent workers in vocational guidance:

In my recent book, "American Problems," the essay on "The Choice of a Vocation," demanded a most careful study of the personal individualities. It was a protest against the haphazard selection of one's life work.

I have felt more and more strongly that the right guidance of the youth to the special life occupation is a function of the community no less important and no less difficult than the right schooling. The first step towards the fulfillment of this too long neglected duty must evidently be an analysis of the demands which are made by the various vocations. Such an inquiry cannot be helpful, if it asks only for an enumeration of the technical requirements. What seems necessary is not a superficial outside view, but an understanding of the deeper inner demands of our occupations and professions.

The demands of the vocations have been quite carefully estimated and there is very little difference of opinion regarding them among people who have investigated this field of effort. The great diversity of opinion about the methods of estimating the talents of people is due to the numerous systems of psychology that exist, and the prejudice on the part of many against the observational methods of studying people, which are the only ones that have thus far given much usable material to the vocational adviser. In speaking of the outlook for a system of psychology Hugo Muensterberg said, on page 100 of his book, "Vocation and Learning," published in 1912:

The psychological sciences are as undeveloped today as the sciences of the physical universe were perhaps three hundred years ago. Three hundred years hence the psychological sciences too may have such an abundance of subdivisions and wherever today we have only a little cluster of problems there may be in the future a full-fledged scientific doctrine.

This will be very well for the people who live three hundred years from now, but must humanity suffer for three centuries longer because of the want of a practical system of psychology? More than a century ago Drs. Gall and Spurzheim discovered the inductive method of mind study, which resulted in a system of practical psychology based upon the proportionate developments of the organs of the body, the centers of the brain, and the features of the face. Many of the most intelligent educators of the world have tested these discoveries in making mental adjustments to increase personal efficiency

and to harmonize the tendencies of life, as well as in giving vocational guidance. This system of mind study and applied psychology has always received the full endorsement of those who have been progressive enough to investigate its principles.

When Horace Mann was a Member of Congress he had a seat next to Henry Clay, and in his Journal he made the following comment:

WASHINGTON, Dec. 11, 1849.

Half an hour ago, Mr. Clay came into the House, and took a seat near mine. I have been studying his head,—manipulating it with the mind's fingers. It is a head of very small dimensions. Benevolence is large; self-esteem and love of approbation are large. The intellect, for the size of the brain, is well developed. His benevolence prevents his self-esteem from being offensive; and his intellect controls the action of his love of approbation, and saves him from an excessive vanity. This vanity, however, has, at some periods of his life, led him into follies. He derives his whole strength from his temperament, which is supremely nervous, but with just as much of the sanguine as it was possible to put into it. Considering the volume of the brain, or size of the head, it has the best adjusted faculties I have ever seen. The skull, after death, will give no idea of his power, as he derives the whole of it from his temperament.

One one occasion Horace Mann, with his friends, George Combe and wife, visited the home of General William Henry Harrison, while he was the Whig candidate for the Presidency of the United States. Horace Mann made the following observations of General Harrison's developments:

The conversation and phrenological appearance of Gen. Harrison indicated a man of clear intellect, without any great strength. His superiority undoubtedly comes from the absence of disturbing forces, rather than from original energy. He has no predominant self-esteem, or love of approbation. Those organs are small. Combativeness is also small. Alimentiveness and acquisitiveness are almost wanting. The moral region is tolerably developed; but this absence of the great mischief-working propensities gives it fair play. This is the key to his character and history.

This method of analyzing character, used by America's greatest educator, should be emulated not only by educators, but by everybody. In his "Life of Horace Mann," Dr. B. A. Hinsdale recognizes that the study of phrenology did much more to fit Horace Mann for his great educational work than his earlier readings of Browne and the other metaphysical psychologists.

The first authoritative work on vocational guidance was

written by Nelson Sizer in 1872, and published by Mason, Baker and Pratt, of New York. The title of this book is: "What To Do, and Why," and the following subtitle is given: "How to Educate Each Man for his Proper Work: Describing Seventy-five Trades and Professions, and the Talents and Temperaments Required for Each." The book was based upon phrenology and physiognomy. It was dedicated to Henry Ward Beecher, because of his advocacy of phrenology and the practical use he made of it. The title of the book has since been changed to "Choice of Pursuits," and it has undergone several revisions. At the present time it bears the same relationship to recent books on vocational guidance that Shakespeare's works do to the novels of the present day. On account of the many new vocations that have developed during the past quarter century "Choice of Pursuits" is very much in need of being revised again, but the many illustrations it contains and the fund of valuable material on vocational guidance within its covers make it invaluable to every vocational adviser. The publishers of this work did not exaggerate when they said in their preface:

What ought I to do? and; How should I be educated for duty? are important questions. This book deals with them pointedly, and may be read with profit by all successive generations. A story once read is dismissed. This book will bear fifty readings. Every page is full of instruction. None, with a true sense of its value, would be without it.

Although some of the vocations mentioned in the latest revised edition of "Choice of Pursuits" have become obsolete and a number of the recently developed vocations, such as wireless telegraphy, aviation, chemical engineering and other occupations that have come into prominence in recent years are not mentioned, there is so much fundamental material in the book that it can be made to render most valuable service in vocational guidance. In this chapter space will not permit to give a detailed account of the demands of the vocations, but there are now a number of new books on the subject that can be found in most any library.

Among all the books that are used in the schools the one entitled, "Choosing a Vocation," by Frank Parsons, Ph. D., who pioneered in the work of vocational guidance in Boston, is one of the best. On page 20 he makes the following suggestions:

If the youth already has a good start or an excellent opportunity in some line of work for which he is reasonably well qualified, the question may come whether it is not better for him to follow up this opportunity than to go off and try to build up a career in a new line which, though it may be somewhat more attractive to him, is far less easy of access and much less certain to produce successful results.

With both classes of applicants it is a common thing for the counselor, after a little questioning, to give the youth one of the Bureau's sheets of instructions, and a leaflet on personal investigation together with a standard blank book which we buy at the rate of one dollar a hundred, and ask the applicant to make a careful study of himself with the help of his friends, answering in the book so far as possible all the questions in the list, and then come back for another interview.

The case may be so clear that this is not necessary; but where the questions of the counselor do not bring out the decided aptitudes and abilities or clear indications of wise policy in the choice of an occupation, this fuller study should be made by the applicant, and it is an excellent thing for him to make it in any case, though not by any means essential in all.

While I am questioning the applicant about his probable health, education, reading, experience, etc., I carefully observe the shape of his head, the relative development above, before, and behind the ears, his features and expression, color, vivacity, voice, manner, pose, general air of vitality, enthusiasm, etc.

From the last paragraph quoted it is evident that Dr. Parsons saw the importance of studying the proportionate developments when he spoke of observing the shape of the head and the relative developments above, before, and behind the ears. He also shows very clearly that it is much easier to give vocational guidance to some individuals than to others. Geniuses who have some tendencies predominating very much over the rest show such decided tendencies for certain vocations that it is possible to see at a glance their aptitudes. When there is a symmetrical development it indicates versatility and adaptability, with an interest in many different lines of thought and action rather than a decided choice for any one of the ten thousand vocations that are now in America. In connection with this subject we shall give photographs of pronounced developments and indicate the vocations for which persons are best adapted. It will not be necessary to work out ten thousand different types for that number of vocations, as the requirements for a number of vocations are similar. It is therefore possible to divide the vocations into groups, and study the adaptability of individuals for these various groups.

It is evident to any person who has given any thought at

all to the matter of vocational guidance that the blacksmith needs physical and mental tendencies that are quite different from those of the watchmaker, jeweler, manufacturer of electrical appliances, and workers in other fine constructive lines. In all mechanics there is need of ability in construction, but the workers in the finer mechanics need to be much more finely organized than the blacksmith, and, in some lines, require a much stronger creative imagination. The worker in fine mechanic arts requires many of the tendencies of workers in the fine arts. In the business world the manager needs different characteristics from those of the successful salesman, the employment manager, the bookkeeper or stenographer. To give reliable advice it is necessary to know the physical and mental tendencies that are required for each of these.

In educational work the developments that constitute the successful kindergartner or primary teacher may not fit the person to do successful work in the grammar grades or in the high school. The college and university teachers need different mental tendencies and professional training from all other teachers. Some persons have such versatility and adaptability that they can teach in any of the grades from the kindergarten to the university. Others who are admirably adapted for one grade will be total failures in others.

In this age of specialization the problem of vocational guidance is more difficult than it has ever been before; hence it is essential that the vocational adviser know as much about the human organism as the physician, and be thoroughly equipped with a knowledge of practical psychology. The system of mind study that is most helpful to the vocational adviser was discovered by Dr. F. J. Gall and elaborated by Dr. Spurzheim, George Combe and others. Upon this system Horace Mann built his entire educational work. Dr. Hinsdale, in his "Life of Horace Mann," says on page 101: "Mr. Mann accepted at the hands of Gall and his disciples his whole philosophy of human nature. He built all his theories of intellectual and moral improvements upon the ideas with which they furnished him. Their teachings strongly reinforced his belief in the improbability of man, thus making him still more optimistic than he was. His aim as a practical reformer became more definite and certain under their influence."

Cyrus Pierce, a graduate of Harvard University, was a contemporary of Horace Mann. He was an ardent phrenologist, and said: "The book to which, after the Bible, I owe

most, is that incomparable work of George Combe, on "The Constitution of Man." It was to me a most suggestive book, and I regard it as the best treatise on education and the philosophy of man which I ever met with."

Dr. Samuel G. Howe, teacher of Laura Bridgman, printed "The Constitution of Man," in raised letters for the use of the blind, and in sending a copy of it to Mr. Combe wrote a letter in which he says:

I consider this edition of your great book to be the most valuable addition ever yet made to the library for the blind in any language. I have already had warm expressions of gratitude from intelligent blind persons for putting the "Constitution" within their reach—gratitude and thanks which belong rather to you than to me.

On another occasion Dr. Howe said that, until he became acquainted with phrenology he was as blind as the pupils that he was trying to teach, deriving very little pleasure from his work, and he feared that he gave very little pleasure to his blind pupils. All the systems of psychology that have been developed since the time of Horace Mann, Cyrus Pierce, Dr. Howe, and the other eminent educators of their time, fail to give the help in vocational guidance that they derived from the phrenological system. One of the greatest losses that humanity has sustained during the past century has resulted from the failure to continue the use of the practical psychology that made these men conspicuous in their educational work. The sooner the educators of the present use Gall's discoveries as a basis for their work the sooner they will have a system of psychology that will make the work of mental adjusting and vocational guidance scientific and efficient. In a letter to the Editor of the *Character Builder*, dated August 6, 1919, from Dr. W. C. Ruediger, Professor of Psychology and Dean of the Teachers' College, George Washington University, the following statements were made:

I have looked into the work of Gall, phrenology, and character analysis, sufficiently to know that our orthodox psychologists are grossly ignorant of much in this field that would be of great value to them. The work in mental testing and vocational guidance now developing in our universities is excellent so far as it goes, but without the help that the movement Gall inaugurated can give, it is operating largely in a blind alley.

Progressive educators, who have investigated all the current systems of psychology, come to the conclusions expressed by Dr. Ruediger, that there is need for the practical psychology

of Dr. Gall in mental testing and vocational guidance. William Hawley Smith, the veteran educator, who is author of the epoch-making educational work entitled, "All the Children of all the People," in a letter to the writer under date of January 21, 1921, said:

The matter of getting young people started in some line of work for which they have native ability is one of the greatest services that can be rendered to humanity. I am glad to say that I am getting much evidence that my book is helping some, at least, in this direction. But, after all, the concrete work that you are doing must, in the nature of things, be the most effective in producing results. More power to your arm!

I am not as familiar with Gall as I should like to be, but from what I do know of him I am sure he had the true conception of the basic principles which have to do with the human mind and individual possibilities of expression. I am also certain that many of the modern psychologists, who attempt to measure human beings and their possibilities with scales and yardsticks are on the wrong track. As I said long ago, in "Dodd," "the soul cannot be measured with a line." You are rendering a great service to your constituency by calling attention to this fact.

The author of this work has tested these principles of character analysis in mental adjusting and vocational guidance for nearly twenty-five years, and during several years of that time taught the principles of psychology and education in normal training schools, thus having an opportunity of comparing the different systems. The phrenological system has been by far the most helpful in every phase of the work. Through the efforts of Dr. Bernard Hollander and others in England the best of the various systems of psychology is being selected and systematized with a phrenological basis, so as to be adapted to all kinds of human adjustments and to vocational guidance. Dr. Hollander is author of several excellent books on human culture, based entirely upon the phrenological principles, verified by the experimenters in other schools of psychology and physiology. These books are causing scientists throughout the world to take notice of the phrenological doctrine, and to investigate it.

In America the phrenological principles have been popularized by the authors of several systems of character analysis, and the commercial world is now adopting these principles very extensively. It is easier to introduce new principles into the business world than into the academic world. Business men ask only two questions of an applicant: First, "Do you know how?" and second, "Can you be trusted?" In the academic world the first question is, "What degrees do you

hold?" and the second, "What universities have you graduated from?" On account of the severe criticisms that have been directed against educational institutions during recent years there are very pronounced and rapid changes being made and there is now hope that the work of the American schools will soon be placed upon a rational, scientific basis. Then all the adjusting that is necessary in the lives of children and all the vocational guidance needed by the young people can be given in a satisfactory manner by the workers in the public school system. The work of the public schools must expand until it includes instruction to "all the children of all the people" in all the branches that are necessary to equip them for their vocations and for right living. The educational adjustments must begin in the normal training schools, where the teachers are prepared for their work. Professor M. V. O'Shea, in his book, "Education as Adjustment," says on page 53:

Nowhere apparently has formalism been more evident than in the training of the teacher. The normal schools have in the past been great dispensaries of formalism; they have taught rules rather than human nature; they have tried to make the teacher a shopman instead of a naturalist. Now an attempt to present a complex field of thought and action in simple dogmas must result in formalism; and while memorizing of this sort of thing may do for the tyro, who would have it appear that he possesses knowledge, still it makes a very poor equipment for one who must grapple with real situations in the schoolroom.

Again, on page 39 of the same book, he says:

It must be acknowledged that, when compared with the other sciences, very little of genuine worth regarding the value of studies, and the modes of treating them to develop their full value, is coming to us from any source. The men in the normal schools are not utilizing their unsurpassed opportunities to observe the outcome of studies and methods upon developing children. These schools are, theoretically, research schools in part or laboratories where the conditions needful for investigation of a high order are supplied,—where problems may be simplified and the operation of individual factors in the teaching process observed. They are supposed to be the experimental stations in teaching, and education is more liberally supplied with them than is agriculture or biology or medicine.

The normal school belongs very largely to the genus shop rather than to the genus laboratory. It spends its energies in applying what it thinks is truth rather than in adding to the body of truth, or even in testing in any critical way what it has inherited from times past. It is encouraging to note that it is conceded today that the normal school should do a broader work than it has done in the past; it should aim to originate as well as to test and apply.

Professor O'Shea, from whose book the above quotations are taken, has been head of the Department of Education in the University of Wisconsin for a number of years, and is generally recognized as one of the progressive educators of America. The conservatism in normal schools indicated above is responsible for not adopting the psychology of Dr. Gall and his scientific followers, upon which Horace Mann, America's greatest educator, built his entire system of education. No other system of psychology has been developed that meets the needs in vocational guidance and mental adjusting as well as this. When this system is universally adopted most of the misfits of society can be avoided by giving vocational guidance to all the boys and girls when they reach an age that makes it necessary for them to decide regarding the vocation to which they are best adapted.

That the school psychology has not yet furnished a system of measurements that aids in vocational guidance is acknowledged by Dr. Louis M. Terman, Professor of Education in Leland Stanford, Jr., University, in his book, "The Measurement of Intelligence," page 49, as follows:

The Binet scale does not pretend to bring to light the idiosyncrasies of special talent, but only to measure the general level of intelligence. It cannot be used for the discovery of exceptional ability in drawing, painting, music, mathematics, oratory, salesmanship, etc., because no effort is made to explore the processes underlying these abilities. It can, therefore, never serve as a detailed chart for the vocational guidance of children, telling us which will succeed in business, which in art, which in medicine, etc. It is not a new kind of phrenology.

A knowledge of the student through the observational method of character analysis and a knowledge of the demands of vocations form a scientific basis for vocational guidance. Neither the "Trial and Error Method" nor the Questionnaire will solve the problem. There is now harmony of ideal in vocational guidance, but there must also be harmony in method.

CHAPTER XVIII

CHARACTER ANALYSIS IN SALESMANSHIP

In no other phase of the world's work has the subject of character analysis received more attention during the past few years than in salesmanship. Salesmen have always been keen students of character because their success has depended upon their ability to analyze each person with whom they did business, and to approach him in a way to make the best impression. Those who have sharpened their perceptive powers through daily contact with people usually see the advantage of getting, in addition to their own experiences, a training in the principles of character analysis as they have been systematized by those who have made the study of human nature their specialty. As it is necessary for the salesman to size up people at a glance any cumbersome system of mental testing would not serve his purpose. All the systems of character analysis that have been exploited in the business world are based upon the observational method of character reading, which has as its foundation the principles of physiognomy and phrenology. To apply these principles intelligently the first essential is a practical acquaintance with the elementary powers of life and the proportionate developments of the entire organism as explained in the first chapters of this book. The one analysis serves the purpose in all vocations, but after becoming familiar with the analysis of mind the method of applying the principles varies in the different vocations. One applies them in adjusting the tendencies of children, another in vocational guidance, a third in re-educating criminals, a fourth in balancing the lives of the insane, a fifth in salesmanship, a sixth in medical practice, a seventh in the legal profession, and so on throughout the various vocations.

The study of human nature has been recognized as such an important element in salesmanship that the leading schools of salesmanship throughout America have made the subject of character analysis a part of their course of business training. Some of them have had a special book prepared explain-

ing the details of physiognomy and phrenology. There has been such a demand for these publications that they have been sold in large quantities and great interest has been aroused in them throughout the nation. Much of this work has been very elementary, and the time must soon come when the principles will be presented in a more fundamental way for use in the academic, as well as in the business, world.

The following quotation is taken from "Salesmanship and Business Efficiency," by J. S. Knox, page 194, and shows how salesmen are advised to study people physiognomically:

When you are selling a man you should study his face with a hawk-like intensity. By observing an individual's dress and general appearance you can draw a pretty accurate conclusion as to his habit of thought. You can tell his temperament and quite correctly judge his inclinations. Study faces and try to remember them. Take a personal interest in people. Try to determine how old people are when you meet them. Try to determine their business or position in life.

Too many people go through life without seeing any more than they have to. That is one of the main reasons they don't amount to more than they do. When an individual does not use his eyes it means that he does not use his brain.

No matter how brainy a man may be, no matter how well educated he may be, he will be a failure as a leader of men unless he thoroughly understands the principles of human nature and how to manipulate them so as to induce action in his behalf.

Every other writer on salesmanship realizes that the knowledge of human nature is a valuable asset in that vocation. It is interesting to follow a traveling salesman and observe how dignified he is in his approach to one man, and how unconventional and free he is toward another. He has come in contact with people sufficiently to form an estimate of their general characteristics at a glance, and has learned through experience that he must not approach any two men in the same way if he wishes to be successful in his work. It is a mistake to believe that anyone possessing a knowledge of human nature can influence people as the successful salesman does. It requires a certain personality to be able to do that.

The essentials of successful salesmanship are: First, the right combination of physical and mental tendencies to adapt him for the vocation. Second, a knowledge of the article he wishes to sell. Third, a knowledge of human nature to enable him to influence the people to whom he wishes to sell his goods.

It is amusing to go into a store and meet clerks who have taken a brief course in salesmanship that did not include any knowledge of human nature. Their work is so stereotyped that they approach all people in the same way, and tell their little story just the same to all. It is much the same with the canvasser, who has learned his little routine talk, and uses it in exactly the same way in every house that he visits, without considering the personality of the person to whom he wishes to sell. He does not do much business until he nimbles up and puts his individuality into his talk while adapting it to the different personalities of the people he meets. In this twentieth century competitive life conditions are so strenuous and competition is so keen that it is necessary to use up-to-date methods in order to influence people sufficiently to do business with them. The banker studies human nature to keep people from taking advantage of him, but the salesman studies it in order to influence people to purchase what he has, whether they want it or not. In aggressive salesmanship where it is necessary to go out and find the customer and then get him into a mental attitude so that he will patronize the salesman there is much greater need of a training in the principles of character analysis than in standing behind the counter to supply the needs of people who have already decided what they want and merely need to be served. In recent years the business world has recognized that salesmanship is an art that can be improved. Like poets, salesmen are born, and not made. They must have natural ability for their work, but adjustments can be made in their own lives that will result in greater personal efficiency and that will assure them success in their chosen vocation. While applying the principles of human nature in studying other people and influencing them they also render valuable service in self-development.

CHAPTER XIX

EMPLOYMENT MANAGERS

One of the most recent vocations to develop is that of employment manager. Almost every large business house now has a specialist whose duty it is to study applicants for the various positions in the institution and select those whom they consider best adapted for the work. It can be readily seen that character analysis is one of the first essentials in this vocation, so that applicants who come in to seek employment can be studied at a glance in order to make an estimate of their ability and adaptability for the employment they are seeking. It is now much less common than formerly to dismiss persons who are given certain work to do and fail to reach the standard of efficiency that is desired. In many instances such individuals are transferred to some other kind of work where they are decidedly successful. A contractor who has in his employ a large number of men said recently that by transferring his unsuccessful men from one department to another he had had such good results that he found it necessary to discharge only one man because of his inability to fit into any of the departments. This contractor had made a study of the practical psychology explained in this book, and was able to apply it with most excellent results.

In the employment department of one of our American cities the man in charge had studied the principles of character analysis and used them in giving vocational guidance to men who sought employment when they asked for work that he could see they were not well adapted to. In this way it was possible to get greater permanency in the connections between the persons for whom he found employment and their positions.

As soon as the work of vocational guidance is performed in an efficient manner in the various schools, and young people are trained for the work to which they are best adapted there will be fewer misfits than at present, and the work of employment managers will be less difficult. In vocations that re-

quire a long course of training the help in choosing a vocation must be given long before it usually comes to those who seek employment through the municipal employment bureaus or from the employment managers of large manufacturing or commercial institutions. The efforts that are now being put forth along these lines will result in human conservation, and will help individuals to get into vocations that are pleasurable to them and where they can render efficient service. There are still too many people in vocations where they are watching the clock hour after hour anxiously waiting for quitting time to come and where they dread to begin their work in the morning. The world's work will be done more efficiently and the workers will get much more enjoyment out of life when each individual is doing work that is pleasurable to him from morning until night, and that he can do most efficiently.

The employment manager does not have as complex a problem to solve as the vocational adviser who is compelled to give help to all types of persons who must fit into one of the ten thousand vocations. In most manufacturing and business houses the number of vocations is so small that it does not take the employment manager long to become familiar with the demands of all of them. Applicants for these vocations have had previous training or experience if special skill is required, so that the problem of choosing the proper person for the various vocations is not so complex. The employment manager who is well qualified to perform his work eliminates the element of chance to a very great extent, and makes the work systematic rather than haphazard. It is likely that within the very near future every school will have somebody connected with it who understands the principles of character analysis and the demands of the vocations, and will apply such information in helping the students choose the vocations to which they are best adapted. Every business house will have an employment manager who is familiar enough with the problems of employment to make the connections between individuals and vocations in a scientific manner. This is a service that has developed during the last few years, and has come to stay, because the complex conditions of modern civilization have created a demand for such work and the need for it is likely to increase each year.

CHAPTER XX

CHARACTER ANALYSIS AND HUMAN RELATIONSHIPS

In our first chapter on the practical application of the principles of character analysis their value in self-development was shown. In another chapter the relationship of the salesman to the people with whom he does business was explained. These principles are not limited to any vocation, but are fundamental in all human relationships. If they were generally understood and applied many misunderstandings might be avoided, and people would become more tolerant and sympathetic toward one another. There is too much destructive criticism in the world. There are too many people who think when the acts of others are not as ideal as the critic imagines they should be that the deviation from the ideal is due to wilful misdirection of energy, when the fact is, that it is due to lack of power of will to control certain tendencies. A more thorough knowledge of human nature would lead to constructive criticism that would help the offending one to make the mental adjustments necessary to reach the standards that the critic thinks he should attain. If people had a better knowledge of human nature and its application in human welfare they would spend more time in discussing principles and needed adjustments when they meet in a social capacity. Back-biting, slander, and other similar vices injure the ones who indulge in them, as well as the individuals whose characters are attacked. These vices are especially common in small communities, where everybody knows everybody else's business, and where some are disposed to pay more attention to the business of others than to their own.

The need for applying character analysis in making mental adjustments is pointed out very clearly by D. A. Gorton, M. D., in his "Mental Hygiene," page 134, as follows:

How common are breaches of fidelity and courtesy in social intercourse; insolent, or overbearing conduct toward fancied inferiors; the in-

dulgence of envy, malice, morbid suspicion, jealousy; contempt for poverty and the poor; obsequiousness toward wealth and the rich; habits of evil speaking and unwarrantable detraction; ungenerous and uncharitable judgments; rejoicings over the misfortunes of a rival,—I will not say an enemy, for it is quite unhuman to take pleasure in the prosperity of such a rival; praying in public; putting on the garb of religion, or frequenting places of worship, for business ends; libeling an opponent, or retailing gossip to his prejudice; taking undue or unfair advantage in trade; false representations; habits of exaggeration; practicing numberless devices—not strictly unlawful—by which profits may be enhanced; as underweight; watering milk, molasses, etc.; selling some articles below cost and others above, in order to attract custom by appearing to undersell a neighbor; adulterations of food and drink and various articles of manufacture; sales of shoddy, or damaged goods and merchandise, etc. It is impossible to mistake the animus of these things, nor to doubt that they are committed by people who would do worse acts if they dared. Fraud and dishonor are so common in Christendom, in all the trades, customs, usages, dealings, and professions, as to suggest universal plethora of the passions and propensities, and a corresponding anæmia of the moral brain and sense. Everybody suspects the honesty of his neighbor, and the neighbor, in turn, suspects the trustworthiness of everybody; and in the moral chaos of the times the skeptics find new and just reasons to doubt the practical value of the gospel, and the pagans to make caustic reproaches against the religion of Christ!

It is needless to remark that the prevalence of such vices indicates moral aberration, an unsound, ill-balanced mental constitution, inimical to the health of either body or mind. They have an origin in the undue and unrestrained activity of the selfish propensities; powers good in themselves, not necessarily vicious nor vitiating, nor incompatible with the noblest moral and intellectual endowment, whose function it is to look after the interests of self. They are legitimately self-seeking, and very properly concerned in the supply and gratification of the animal wants. It does not accord with their nature to be choice in the means or method employed to this end. Who ever saw an animal mindful of the rights and feelings in its fellows? Foxes rob hen-roosts, dogs steal their dinners, and animals, in general, prey upon one another for the same reason and in the exercise of the same impulse that impels men, when unrestrained by the moral sense, to prey upon the rights and interests of their fellow-men. Nothing better is expected of the animal, for reasons well understood; but a high moral sentiment would effectually oppose such flagrant disregard of the rights of others by man; and he is, in general, afraid or ashamed, when actuated by no right motive, to commit such deeds openly and above board, and accordingly seeks the shadows of the night, and the ingenuity of low cunning or adroit trickery, to achieve the end he desires, without incurring the legal penalty attached!

The natural safeguard against the existence and exercise of such perversity in man is found in strengthening the moral sentiments with which the Creator has endowed every human creature. These are the natural antagonists of the propensities. While the latter are self-seeking, the former are concerned with the interests of others. A high sense of honor is shocked at the thought of committing deception or telling an

untruth; a fine sense of justice is outraged at the idea of double dealing, or in "playing sharp," as so many glory in doing; the sentiment of benevolence is wounded at the sight of distress and poverty, and finds the sweetest consolation in binding up broken hearts and relieving the wretchedness of the world, without regard to race or moral condition. The beautiful story of the good Samaritan is a fine illustration of the influence of this sentiment upon the character. It seeks not its own but others' good. In a world of so much want and misery, arising, in good part, from privation of the physical comforts of life, the hoarding of great riches would seem to be incompatible with the possession of a large degree of goodness; and from this point of view the advice of Christ to the rich man seeking salvation, to sell all he had "and give to the poor," receives additional force and meaning.

The aspiration for inward goodness and purity is also peculiar to man, and its cultivation holds him absolutely above the practice of everything mean and groveling.

The personal and social adjustments that must be made to get rid of the discords that retard human progress and to develop the harmonies that will enable every individual to get the most out of life, must be made by applying the principles of psychology and sociology.

CHAPTER XXI

MENTAL HYGIENE

Health of mind, as well as of body, is not only productive in itself of a greater sum of enjoyment than arises from other sources, but is the only condition of our fame in which we are capable of receiving pleasure from without.—Sir James Mackintosh.

One of the most important uses to which the principles of character analysis can be put is in making the adjustments that are essential to the harmonious action of all the powers of mind. In mental hygiene the physical basis of life is a very important factor that should be thoroughly understood, but has received too little attention from many who have treated the subject. One of the pioneer writers on this subject was D. A. Gorton, M. D., whose book on "Mental Hygiene," was published in 1873. On page 17 the author says:

A system of hygiene, or of moral philosophy, which does not recognize the superior excellence of man's nervous organization; which appreciates not the grand distinction and superiority of his mentality over that of other animals; which, in short, fails to recognize his grand spirituality, and to perceive the wide chasm which separates him from all other orders of beings in nature, must obviously be defective. The works on physiology and hygiene, of which there are many admirable in their way, apply almost equally well to man as an animal, or to an animal as man. The higher functions of the nervous system, comprehending the religious element, and the influence of physical causes upon its manifestations, are but slightly and incidentally touched upon. Studies in mental hygiene and therapeutics should remedy this obvious deficiency; and a few writers have lately been bold enough to risk the charge of heresy in opening the discussion. Among the most prominent works which have taken advanced views on the subject is Mr. Graham's "Science of Human Life," an able book, but little read, owing to the unpopularity of its author's well-known views of dietetics. "The Constitution of Man," by George Combe, tends in the same direction. "The Principles of Physiology," by Andrew Combe, is also an exception in this respect, to the usual works on hygiene; and Dr. Ray's "Mental Hygiene" is an admirable monograph, fulfilling, in many respects, the just requirements of the subject. In conjunction with Maudsley's and Winslow's able contributions to mental physiology, the subject of mental hygiene becomes comprehensible.

In his book on "Mental Hygiene," Isaac Ray, M. D., says:

Since the intellectual and moral faculties are equally dependent on the brain, the manifestations of cerebral disorder are as likely to appear in one as in the other. Which it may happen to be, is a question, I apprehend, of cerebral locality, and, it may be, of certain organic conditions not yet understood. It is not disputed that disease may affect the intellect, without, at the same time, involving, apparently, the affective powers; and it is no less obvious that the latter may be greatly disordered while the former seems, at least, to remain in its normal condition.

So long as the intellect is not visibly diseased, it is alleged, there is no insanity,—none certainly that can impair the legal responsibility of the patient. Disease may sap the very foundation of the moral nature; it may blast the sentiments of benevolence, of justice, of veneration,—changing naturally mild and amiable dispositions into malignant passions; converting the man of generous, open hearted nature, into a miser, with no thought of anything but accumulation; the man of sternest integrity into a pilferer of the smallest description; the staid, quiet, respectable citizen into a noisy, shameless brawler, regardless of every rule of common propriety or courtesy,—and yet, in no court of conscience or of justice, is he to claim any exemption from the ordinary consequences of vice and crime! Surely, it is a monstrous doctrine to put forth in an age of humanity and science, that just when these moral checks and balances which the Creator has placed in the human soul, for the proper ordering of the life and the attainment of life's great ends, are disarranged and perverted by the intrusion of a foreign element, the individual is none the less capable of performing his moral duties and obligations, and none the less accountable for any shortcomings that may follow. It is difficult to argue against a doctrine so destitute of any foundation in fact, and opposed to the testimony of every day's observation; and one is obliged to be contented with simply an expression of wonder and amazement.

Dr. Ray published his book in 1863, and at that time there was considerable opposition to the idea that all phases of the mind are connected with the brain. The idea was still prevalent, as it is among certain classes today, that the intellect functioned through the brain and the emotions were connected with the heart. The correct relationship between mind and the nervous system is now much better understood by physiologists and psychologists than formerly. If the truths that are explained in such books as Graham's "Science of Human Life"; the works of Dr. Andrew Combe and of George Combe; the books on "Mental Hygiene" by Gorton and Ray, from which we have quoted above, were given in the popular text-books on hygiene today much might be done to remove the causes of mental ailments that are often permitted to go on until they wreck human lives. It is possible to simplify the

principles of human nature and character building so that young people can understand them, and it is also possible to simplify the principles of mental hygiene so that they can be understood from a very early period of life. The emotions play such an important part in health and disease that every individual should understand them and their influence upon the body.

The celebrated author, Dr. Hack Tuke, in his book, "The Influence of the Mind upon the Body," vol. 2, page 121, says:

The emotions powerfully excite, modify, or altogether suspend the organic functions. In regard to the processes of nutrition, the pleasurable emotions tend to excite them. Hence the excitement of certain feelings may, if definitely directed, restore healthy action to an affected part. Violent emotions may modify nutrition, various forms of disease originating in perverted, defective, or inflammatory nutrition being caused primarily by emotional disturbances.

As respects secretion, the emotions by causing a larger amount of blood to be transmitted to a gland increase sensibility and warmth and so stimulate its function, or they may directly excite the process by their influence on nerves supplying the glands. Painful emotions may modify the quality (i.e. the relative proportions of the constituents) of the secretions. The emotions may check secretions, either by extreme acceleration of blood through a gland, by unduly lessening its afflux, or by direct influence upon the gland. Although, as a rule, the activity of those glands which bear special relation to an emotion is in a direct ratio to its force, the secretion is checked when the emotion is excessive.

The pleasurable emotions tend to act only in one direction, that of increased activity of the secretion, but the painful emotions act both in stimulating and arresting secretion. Thus grief excites the lachrymal and fear the salivary glands, while anxiety suspends the gastric. Extreme fear induces perspiration.

While the intellect confines its operations mainly to the brain, although capable of exciting motion and the organic functions, the emotions act with by far the greatest force upon the heart and lungs, the vessels, and the glands. Probably we cannot go much beyond these general principles which, combined with the law that any emotion, which either by its character or suddenness depresses the activity of the controlling power of the cerebrum, allows of the irregular or excessive action of the encephalic, spinal, or sympathetic nerve centers, will generally serve to explain the changes induced in the body by varying mental, especially emotional, states.

The value of cheerfulness has been recognized by writers from the beginning of the world down to the present time. Charles Lamb said: "A laugh is worth a hundred groans in any market." A hopeful, cheerful mental attitude should be cultivated in every life, because such mental states have a wholesome influence upon all the functions of the body.

Cheerfulness promotes the circulation, and thus gives warmth to all parts of the body and relieves congested lungs and liver. Solomon knew the influence of cheerfulness when he said: "A merry heart doeth good like a medicine, but a broken spirit drieth up the bones;" and again, "He that is of a merry heart hath a continual feast." The environment of home, school and community should be such as to cultivate pleasant mental states in children. Fears have a very depressing effect upon life and are one of the chief causes of insanity. That great lover of plants and children, Luther Burbank, in his book, "The Training of the Human Plant," says:

Rear children, if possible, amid pleasant surroundings. If they come into the world with souls groping in darkness, let them see and feel the light. Do not terrify them in early life with the fear of an after world. Never was a child made more noble and good by the fear of a hell. Let nature teach them the lesson of good and proper living, combined with an abundance of well-balanced nourishment. Those children will grow to be the best men and women. Put the best in them by contact with the best outside. They will absorb it as a plant absorbs the sunshine and dew.

It is very common to read of children breaking down their nervous systems and injuring their health through over-study, but if these children had received the benefits of hygienic living and the right training of their powers of mind there would be very little danger of injury from the exercise of the intellectual powers. Dr. Charles Caldwell, who was the first to introduce the practical psychology of Dr. Gall into America and who was recognized as one of the greatest physicians of his time, wrote a valuable treatise on physical education, and says:

The influence of strong and well-cultivated moral and intellectual organs on the general health of the system is soothing and salutary; and feeds and strengthens it, instead of ruffling and wearing it out. Compared to the influence of the organs of passion, it is as mild and wholesome nourishment contrasted with alcohol; or like the genial warmth of the spring and autumn with the burning heat of summer. Life and health and comfort may last long under the former, while all is parched and withered by the latter. Finally, a well-cultivated and well-balanced brain do much to produce a sound mind and a sound body.

Every person in the world should devote a little time every day to exercising the body and some time every day to exercising the intellect. One of the most pitiable conditions that human beings can get into is to work like a slave until old

age approaches, without having formed a habit of devoting some time every day to study. When they accumulate money enough to retire during the latter years of their lives they are at a loss to know how to occupy themselves so that the most difficult work they find to do is to kill time. Sometimes such persons die mentally twenty-five years before they die physically, and in such instances they become a burden to their friends and get no pleasure out of life themselves. M. L. Holbrook, M. D., in his book, "Hygiene of the Brain," page 102, asks: "How are old people to keep the mind from failing, and even becoming obliterated before the body is worn out?" and then answers: "Only by cultivating it. As people grow old they should work less, and read, study, and think more. The reason why so many aged people have a blank where there should be a mind is generally because the latter is not kept alive and active by culture. The rust gets so thick that thoughts cannot be formed."

This same subject is treated in a forceful manner by George Combe in his book, "The Constitution of Man," page 103, as follows:

So many hours a day ought to be devoted to the cultivation and gratification of our moral and religious sentiments; that is to say, in exercising these in harmony with intellect, and especially in acquiring the habit of admiring, loving, and yielding obedience to the Creator and his institutions. This last object is of vast importance. Intellect is barren of practical fruit, however rich it may be in knowledge, until it is fired and prompted to act by moral sentiment. In my view, knowledge by itself is comparatively worthless and impotent, compared with what it becomes when vivified by lofty emotions. It is not enough that intellect is informed; the moral faculties must cooperate in yielding obedience to the precepts which the intellect recognizes to be true. As creation is one great system, of which God is the author and preserver, we may fairly presume that there must be harmony among all its parts, and between it and its Creator. The human mind is a portion of creation, and its constitution must be included in this harmonious scheme. The grand object of the moral and intellectual faculties of man, therefore, ought to be the study of God and his works. . . . Philosophy, while separated from the moral feelings, is felt by the people at large to be cold and barren. It may be calculated to interest individuals possessing high intellectual endowments; but as, in general, the moral and religious sentiments greatly predominate in energy over the intellectual powers, it fails to interest the mass of mankind. On the other hand, before natural religion can appear in all its might and glory, it must become philosophical. Its foundations must be laid in the system of creation; its authority must be deduced from the principles of that system; and its applications must be enforced by a demonstration of the power of Providence operating in enforcing the execution of its

dietates. While reason and religion are at variance, both are obstructed in producing their full beneficial effects. God has placed harmony between them, and it is only human imperfection and ignorance that introduce discord.

For many centuries diet has been considered an important factor in health culture, but its influence upon the mind has not usually been emphasized as much as it should be. The subject is stated logically in the following quotation from "Mental Hygiene," by Dr. D. A. Gorton, on page 50:

Nutrition influences not only the supply of the visible and material fabric of the body, the bone and sinew, muscle and nerve, and brain, but also the mental powers of thought and feeling. The quality of the diet influences the quality of the mind and its disposition. The mental character is modified, exalted, or depraved, according to the quality and quantity of the food one eats. One of the important questions in dietetics, therefore, is, What kind of food is most conducive to the development of the human excellences? What kind of diet is most favorable to civilization, to the growth of honor, honesty, and virtue? rather than, What is most prolific of bone, brain, and fat? for it is undeniable that the latter elements are largely in excess of the former in modern society and civilization.

The facts in support of our hypothesis are by no means few. The influence of quality of diet on one's disposition is strikingly illustrated in the animal kingdom. Contrast the mild herbivora with the flesh-eating carnivora; or, more strikingly still, compare the effect of different diets on the same species. If we wish a dog to be particularly ferocious, we give him raw flesh to eat. The common house-cat is rendered decidedly feline in disposition by an exclusive diet of flesh, or mild and tractable on a mixed diet. Wild animals are tamed and made docile, and many of them companionable, by substituting a vegetable or mixed diet for their native one of flesh. A mild, soothing diet very soon subdues the ferocity of the tiger, and subjugates the ravenous propensities of the other members of that family. Moreover, the converse of this mental transformation, through the influence of food, is illustrated by feeding the herbivora on animal food.

Mind and body are so closely related during life that anything which is conducive to health in one has a favorable influence upon the other. When the principles of health culture are universally understood and practiced health will be the rule, and sickness the exception. In the past so much attention has been given in medical books to the descriptions of diseases and their symptoms that it is very refreshing to find the symptoms of health given by an eminent writer on medical subjects. In "Esoteric Anthropology," by T. L. Nichols, M. D., F. A. S., on page 142, there is a chapter on "Symptoms of Health," from which the following is copied:

Medical books are filled with descriptions, symptoms, and causes of disease. I wish to give a clear description, enumerate the symptoms, and guide my reader to a knowledge of the conditions of health.

Health is, to every organized being, the condition of perfect development; to every sentient being the condition of happiness.

Health, in a human being, is the perfection of bodily organization, intellectual energy, and moral power.

Health is the fullest expression of all the faculties and passions of man, acting together in perfect harmony.

Health is entire freedom from pain of body, and discordance of mind.

Health is beauty, energy, purity, holiness, happiness.

Health is that condition in which man is the highest known expression of the power and goodness of his Maker.

When a man is perfect in his own nature, body and soul, perfect in their harmonious adaptations and action, and living in perfect harmony with nature, with his fellow-man, and with God, he may be said to be in a state of Health.

If the organs of the body are all fully developed and in full action, they must necessarily be in harmony; and when a man is in harmony with himself, he is of necessity in harmony with all men, all nature, and with the Source of all things.

It is therefore necessary that every minute organ of the body, every faculty of the mind, every power of the soul should be fully formed and active—all balancing and harmonizing each other; that man should act out all the fullness of his nature, and woman all the glorious beauty of her character, in perfect freedom, and in full enjoyment, to make up the integral condition of Health.

Beauty is the first sign of health. Health gives development; and harmonious development is beauty. Every vegetable and every animal is beautiful, according to its own type of beauty, when it is more perfectly developed. And in man or woman, the exact development of every part, and that which enables it to best perform its function, is the highest possible beauty. The handsomest possible head is the one which has the most perfect phrenological developments. The most beautiful eye, ear, or nose, are those best adapted to seeing, hearing, and smelling. The loveliest mouth has the best shaped lips and most perfect teeth. The most delicious bosom is the one best fitted for its natural office. The finest limbs are those with the best muscular development. In a word, there is no part of the human figure where the best condition for use is not, at the same time, the condition of the highest beauty, and both together are synonymous with health. Consequently, every deformity, every ugliness, every departure from the standard of the highest beauty of its kind, is a consequence and symptom of disease.

O ye, who love beauty, and who desire it for yourselves, for your offspring, and for the race, learn that the single way to attain it is by the practice of the laws of health. Be good, and you shall be beautiful as well as happy. Let no man who has a love for nature and a reverence for God undervalue beauty. It is to be sought, admired, loved and worshipped.

Another symptom of health is activity. Every healthy nerve has a desire to use its power; every healthy muscle wishes to contract; every healthy faculty wishes to find exercise and consequent enjoyment. This rule extends to the organic, as well as the animal system. In health

the secretions are active, and so are the excretions; there is a sharp appetite, quick digestion, a full circulation, an earnest respiration, and everywhere an active nutrition. Body and mind are active. All the passions spring into spontaneous activities, alternating with each other, and all contributing to that great variety of action and sensation which constitute the complex phenomena of Life.

Indolence, on the other hand, is a consequence and a sign of disease. A torpid organ is a diseased organ. A lazy man is a sick man. Give him health, and his laziness will vanish. Every well man is a busy man. There is no tendency to indolence in a healthy person. The real tendency is to high activities; and the healthier the world grows, the more varied and active will be its industry.

Strength, or energy, is a sign of health; though a kind of discordant strength, or spasmodic energy, may be a mark of disease. But steady power comes from integrity of constitution. There must be good brain, good nervous fluid, and good muscular fibre, before we can have real strength, and true persistent energy of character and action. These must come from a deep vitality. Men of strong desires, strong passions, strong wills, have strong lives; and a strong life is generally a long and healthy one.

Weakness—mental, or passional, or physical—is a sign of disease, as it is a consequence. It is want of development, or exhaustion, or hereditary taint, or acquired morbid condition, or all together, one producing the other. If we blame the weak, the vacillating, the craven, the spiritless, nerveless, hopeless, purposeless, we must blame them only for what has brought them to this condition. It is a condition of disease, which, if possible, we must cure.

Happiness is a sign of health, and without health a full enjoyment of life cannot exist. A condition of happiness is said to be "a sound mind in a sound body." This is a simple description of a healthy condition. Happiness is the end or final cause of all sentient life. There is no other conceivable reason for the creation of any being. Happiness is, therefore, the positive and necessary result of every true life, as misery is the inevitable, because equally necessary, result of a false life. As health is the condition of a true life, the result and sign of health is happiness.

Hence all unhappiness of every kind, all pain, grief, regret, jealousy, discontent, anxiety, is the result of disease, bodily or mental, in ourselves or others. Sorrow seems to me just as much the effect of a disease as pain. One is the outcry of a sick organism, the other of a wounded spirit. We feel sorrow by sympathy with others; and there are many persons of sensitive organizations who feel bodily pain the same way. The way to be happy is to be healthy; and when health is universal, there is no conceivable reason why there should be any unhappiness. There is no happiness without a corresponding degree of health, and no health without a corresponding degree of happiness.

CHAPTER XXII

MENTAL MEDICINE

No other phase of the healing art has developed as rapidly in recent years as the mental. Within the regular medical profession much more attention is being given to different forms of mind cure than ever before, and among the laity there are many different schools of mind cure. The great need of the present time is to develop the true healing art, including the reliable and scientific from all sources. There are many physicians who need to know much more about mind and its influence in health and disease than they do, and there are many mental healers who are very much in need of a better knowledge of the human organism and the fundamental principles of health culture than they possess.

In recent years much has been said about psychoanalysis, which is a form of mental medicine. This is based on the discoveries of Sigmund Freud, LL. D., and a number of imitators have entered the field with modified forms of the work he began. When the mind analysis of Dr. Gall is generally understood it will prove itself to be so superior as an analysis of the fundamental powers of life and as a method of practical psychology for use in making mental adjustments that it is likely to very largely displace the psychoanalysis of Freud, as it is much more in harmony with the laws of the human organism. The character analysis explained in the first part of this book can be applied in the healing art with as good success as in vocational guidance and in education. It is based upon the discoveries of Dr. Gall.

Although some forms of mental medicine are as old as the human race, most of the systems of modern times had their beginning in the discoveries of Dr. Anton Mesmer, of Paris. Although the system that he used in his work aroused much opposition it has been adopted in modified forms by the medical profession and by many practitioners who have not had medical training. These principles have been applied in France more extensively than in any other country. Rev.

Chauncey J. Hawkins, who attended a number of clinics in Europe, gave the following account in an article in the "Congregationalist":

As I sat in one of the large clinics in Paris and saw scores of degenerate types of children treated in an effective manner, I could not refrain from reflecting upon the many fathers and mothers who had come to us as pastors of Christian churches for pastoral advice to solicit our aid in the treatment of similar children, and how with a feeling of utter helplessness I had gone about these hopeless tasks in the most ineffective and bungling way; and as I saw these physicians who had no interest in the church, no religious experience, and who would classify themselves as free thinkers, curing children of the habit of lying, stealing, and immoral practices, awakening in boys and girls a new interest in their school work and in life, I was compelled to say, here are men who are doing what Christian pastors ought to have been doing long ago.

The leader of one of the prominent schools is Dr. Paul Dubois, the author of the well known book, "Psychic Treatment of Nervous Disorders." In speaking of the responsibility of the practitioner along these lines, in what he calls moral treatment, he says:

This psychotherapeutic treatment requires great intellectual and moral qualities in the physician who would successfully practice it. It will not respond to mediocrity; success depends on the worth of the practitioner. He needs the gift of moral observation and psychological analysis, authority to command confidence, persuasive speech, convincing logic, a sense of fitness, much tact in telling the truth to patients without wounding their sensibilities, a calm and firm character, great gentleness, much patience and perseverance, and an ardent faith in the effectiveness of moral treatment.

In all my patients I have detected the influence of emotion, of worry, and of passionate outbreaks. I have everywhere been able to see that the original cause of the trouble lies in the native mentality of the subject and in those peculiarities of his character which have not been sufficiently overcome by clear and reasonable convictions. I cannot treat my patients without having recourse to psychotherapy.

Moreover, the patients themselves have no difficulty in recognizing these truths, but they obstinately excuse their condition by arguing the impossibility of changing their temperament. Their habitual reply is, "It is stronger than I. I have always been like this."

Yes, I know it; we preserve our temperament through our whole life just as we keep our physical blemishes; but we can modify it greatly by educating ourselves. Our physical deformities are often definite, but our mentality is always malleable. It is our duty to transform our inner temperament into an acquired character. This task devolves upon all of us, whether we are sick or well.

When a person has a correct analysis of mind for use in making needed adjustments the changes can be made while engaged in the usual activities of life. These changes are greatly hastened when one's work and surroundings are congenial, and when the pleasant mental states are always kept uppermost.

The lack of these conditions is the cause of much disease, so that in order to prevent many of the ailments that are a source of suffering and misery to individuals, harmonious environments and congenial employment should be provided early in life. In speaking on this subject Dr. Clouston, in "Hygiene of Mind," page 107, says:

For health, for happiness, and for efficiency, right work rightly done is the most important matter in any man's or woman's life. Work can unquestionably be made curative in many cases. Work under wrong and unhealthy conditions is, on the other hand, to body and mind, one of the great mental dangers of our modern urban life. It is simply marvelous what men and women may be made out of such material (boys and girls of nervous constitution brought up in the city) by the right sort of food, environment, and work.

Proper suggestions made during the waking state have a more lasting effect in transforming the life of the individual than those made during hypnosis, and do not arouse antagonism as the others do. A little book on auto-suggestion, written by Dr. Parkyn, is full of helpful suggestions on making the physical and mental adjustments that are necessary to overcome illness, and to establish health, vitality and vigor. Other modern writers have emphasized auto-suggestion as an important factor in mental medicine. Many systems of mind cure are so subtle that it is difficult to analyze them and to explain the principles upon which they are based, but it is safe to say that all of them have a psychological basis.

The marvelous cases of healing recorded in the Bible were based upon natural laws that may be understood when we become more familiar with the finer forces of nature. Some of the cures of modern times are as mysterious and wonderful as those recorded in the Bible. A book called "The Modern Bethesda," is made up largely of accounts of the remarkable cases of healing performed by Dr. J. R. Newton. In the beginning of that book there is an account of the different Christian denominations that have made healing a part of their religion. In recent years much has been said about the Emman-

uel movement, which is a system of mental healing conducted by ministers of the Protestant faith, but before the work is undertaken the persons to be treated are diagnosed by members of the regular medical profession to see if they are suitable for the mental methods of cure. This movement was popular a number of years ago, but in some places a feeling grew among the physicians who aided it that the field belonged to them entirely and the movement does not seem so vigorous during the last few years. Some critics have suggested that this Emmanuel movement was introduced to counteract the work in healing done by Christian Scientists and New Thoughters. It is very encouraging to find so many different denominations coming to the belief that it is possible to do in modern times what was done in ancient times. At present there is a decided reaction throughout the world against the materialism that prevailed during the larger part of the past century and it is becoming quite popular for the most eminent scientists to give a spiritual interpretation of things. The present trend of science and thought is toward an investigation of the finer forces of nature in order to interpret scientifically many things that have heretofore been considered mysteries. This is likely to lead to a more fundamental understanding of the laws of human culture. The foundation for the scientific study of the finer forces of nature was laid a century ago when Dr. Gall discovered the relationship that exists between mind and brain. This is one of the most important discoveries that has been made in the history of the world, because of its use in all phases of human development. Since that time many wonderful discoveries pertaining to mind and body and their proper development have been made. These were so far from the established order of things that it was difficult to get recognition for them, so that humanity has suffered a great loss during the past century through being deprived of the helpful service they might have given. The time has now come when these discoveries must again be examined in the light of twentieth century science, in order to develop a terminology that can be generally understood and used, and at the same time to harmonize the principles into one grand system that will be adapted to the proper development of human lives, individually and collectively. The system of mental healing that can be most easily understood and most generally applied consists of an analysis of all the fundamental powers of mind, and a knowledge of mental

adjusting that will enable the person applying the principles to restrain tendencies that are too strong and cultivate those that are too weak, and thus bring harmony into life.

For many years the writer has investigated the various systems of mental healing, not using any of them professionally, but in a number of instances he has applied the principles of Dr. Gall's system of mind analysis, or psychoanalysis, in helping mental patients, with beneficial results. This gives a firm physical basis that is lacking in so much of the work done by the schools and societies that give special attention to mental healing. After having a correct starting point it is possible to explore in all directions and always be sure of a solid landing place. Those who think that all mental healing is the result of suggestion have not thoroughly explored the field. The so-called miraculous cures are done in obedience to natural laws that are not generally understood, but the scientists of the twentieth century are not willing to class the finer forces that are not yet understood as the unknowable, as was done by Herbert Spencer and some other philosophers of the nineteenth century. It is not many years since some of the wise ones said it would never be possible to build air ships that could be controlled while in flight. Only a few years were required to prove such predictions false, and it may not be many years before some of the marvelous things pertaining to the finer forces of nature will be much better understood than at the present time. Among the workers in the realm of human science are many who are well equipped for their work, but others are attracted to this wonderful field of investigation who are not so well equipped by inheritance and training, and they return with information that will not stand the test of time. As it has been customary to study almost everything in the world that is external to human life more than to study the human organism and the laws that control it, it may require some time to train discriminating minds, even by the more fundamental methods that are now being introduced. In this field present tendencies should encourage the most pessimistic individual, because of the marvelous progress that is being made. The application of the principles of psychology, not only in the healing art, but in all other phases of human development, is sure to produce changes that will improve human lives, mentally and physically, until less attention will need to be given to curative work, because of the intelligent efforts that are devoted to prevention.

CHAPTER XXIII

CHARACTER ANALYSIS AND CRIMINOLOGY

All crime is the result of perverting the powers of mind that were intended for good and to produce happiness in the lives of individuals. The time to begin preventing crime is before the child is born. Oliver Wendell Holmes once said: "There are some people who think everything can be done if the doctor, be he educator or physician, is only called in season. No doubt, but 'in season' would often be a hundred or two years, before the child was born, and people do not send as early as that." It is too late for this generation to try to improve past generations through heredity, but by applying the principles of eugenics that have been discovered it will be possible to give better balanced organizations to future generations, so that they will be able to keep their impulses under control of their intellectual and moral powers. If heredity and environments are neglected until the damage is done then the duty of society toward the offender is to help him make the mental adjustments that will develop his higher powers until the troublesome impulses can be corrected from within. In this, society has not done its duty toward the offender in helping him to reform, but has punished him for his offenses, so that after paying his penalty and again becoming a member of society he has often been less capable of controlling his tendencies than before the punishment. Nearly a century ago George Combe, the Scotch philosopher, wrote a book on "Moral Philosophy," in which he had chapters on the treatment of criminals. The following is quoted from page 197:

The present practice in the treatment of criminals, or of those individuals who commit offenses against the persons or property of the members of the community, is to leave every man to the freedom of his own will, until he shall have committed an offense; in other words, until he shall have seriously injured his neighbor; and then to employ, at the public expense, officers of justice to detect him, witnesses to prove his crime, a jury to convict him, judges to condemn him, jailers to imprison, or executioners to put him to death, according as the law shall have decreed. It will be observed that in all this proceeding there is no in-

quiry into the causes which led to the crime, into the remedies for crime, or into the effects of the treatment on the offender or on society; yet every one of these points should be clearly ascertained before we can judge correctly of our social duties in regard to the treatment of criminals.

Mr. Combe then explains that criminals are so organized that they have difficulty in keeping their selfish tendencies under control of the intellectual and moral powers and that the duty of society toward the criminal is to place him in a prison environment that will make the prisoner a self-controlling being, because he will have made the necessary adjustments. He speaks of the extensive observations that were made by Drs. Gall and Spurzheim and their followers for thirty-five years, in many parts of the world. These gave him the most complete conviction that the causes of crime had been discovered and that through proper training and environment they could be overcome. After speaking of the undeveloped brains and minds that it is necessary to adjust in dealing with criminals he said:

I observe that in the case of this class of brains, in which the organs of the propensities, moral sentiments, and intellectual faculties are nearly in equilibrium, society enjoys a great power in producing good or evil. If, by neglecting education, by encouraging the use of intoxicating liquors, by permitting commercial convulsions attended with extreme destitution, society allows individuals possessing this combination of mental organs to be thrown back, as it were, on their animal propensities, it may expect to rear a continual succession of criminals. If, by a thorough and all-pervading training and education, moral, religious and intellectual; by well-regulated social institutions providing opportunities for innocent recreation, this class of men shall be led to seek their chief enjoyment from their moral and intellectual faculties, and to restrain their animal propensities, they may be effectually saved from vice. It is from this class that the great body of criminals arises; and as their conduct is determined, to a great extent, by their external circumstances, the only means of preventing them from becoming criminals is to fortify their higher faculties by training and education, and to remove external temptation by introducing improvements, as far as possible, into our social habits and institutions.

There are instances of individuals committing crime who do not belong precisely to any of the classes which I have described, but who have, perhaps, one organ, such as Acquisitiveness, in great excess, or another, such as Conscience, extremely deficient. These individuals occasionally commit crime under strong temptation, although their dispositions, in general, are good. I knew an individual who had a good intellect, with much Benevolence, Veneration, and Approbation, but in whom a large organ of Reserve was combined with a great deficiency of Conscience. His life had been respectable for many years in the situation of a clerk, while his duty was merely to write books and conduct corre-

spondence; but when he was promoted, and intrusted with buying and selling, and paying and receiving cash, his moral principles gave way. The temptation to which he yielded was not a selfish one. He was much devoted to religion, and began by lending his master's money, for a few days, to his religious friends, who did not always repay it; he next proceeded to assist the poorer brethren; he also opened his house in great hospitality to the members of the congregation to which he belonged. These actions gratified at once his Benevolence and Approbation, and rendered him extremely popular in his own circle; but the expenses which they entailed speedily placed his master's cash so extensively in arrear, that he had no hope of recovering the deficiency by any ordinary means. He then purchased lottery tickets to a large amount, hoping for a good prize to restore him to honor and independence. These prizes never came, and the result was disclosure, disgrace, and misery.

The way to prevent crime, in cases like this, is to avoid presenting temptation to men whose defective moral organs do not enable them to withstand it. Phrenology will certainly come to the assistance of society in this respect, because it affords the means of determining beforehand, whether any great moral deficiency exists.

The conditions described above by George Combe existed nearly a century ago and are not very different from what we find in this twentieth century. The same causes that produced crime a century ago are still in operation, and must be removed before individuals will give normal expression to their powers. The problem of crime is such a complex one that many personal and social adjustments will need to be made to solve it. It is now generally agreed among thoughtful people that the beginning should be made in permitting every child to be well born. The next step is to furnish the environment for each child that will cause its powers to unfold normally and that will result in developing will power and intellect sufficient to keep the appetites and desires under proper control. Thus it is evident that it is largely a matter of education. In writing upon this question William Jolly, Queen Victoria's Inspector of Schools, quotes George Combe as follows, in "Education; Its Principles and Practice":

The enemies of education say that crime increases in proportion as education is promoted; and the statistical returns seem to favor their assertions. But they forget that what is called Education is merely instruction in words and signs. The instruments of education have received no proper instruction concerning either physical or human nature, and have not been trained to the practice of goodness. Let the opponents of education show that crime has been increased by training the Intellectual Faculties and Moral Sentiments to proper activity, and then we will give the matter up.

Where the Philosophy of Man is unknown, children are not taught

any rational views of the order of God's providence on earth, nor are they trained to venerate and obey it; they are not instructed in the constitution of society, and obtain no sufficient information concerning the real sources of individual enjoyment and social prosperity. They are not taught any system of morals based on the nature of man and his social relations, but are left each to grope his way to happiness, guided by creeds and catechisms, which they see many men neglecting in their actions. The poor observe the rich pursuing pleasure and fashion, and if they follow such examples, they must resort to crime for the means of gratification. No solid instruction is given them—sufficient to satisfy their understandings, that the rich themselves are straying from the paths that lead to happiness, and that it is to be found only in other and higher occupations.

The right kind of education will prevent a great deal of crime, but without the right kind of environments many individuals are not strong enough to resist the temptations that come before them. When persons give way to weaknesses and commit crime the duty of society is to help them regain their standing and adjust their lives so that they will not repeat the offense. The modern system of probation is a step in the right direction and has helped many a person to escape the stigma of a jail sentence. A large per cent of persons who are paroled make good, and by this method of adjustment are enabled to support themselves and others depending on them while regaining their standing as honorable members of society. If all who are connected with the parole work were character analysts and practical psychologists the system could be made much more effective than it is at the present time.

The indeterminate sentence, which is supposed to keep persons confined in prison only long enough to help them reform and become safe citizens, is a great improvement over the old method of sentencing for a term of years and thus keeping the individual confined much longer than is necessary to make the adjustments that are needed in his life, or else not of sufficient length to change his physical and mental tendencies so as to give him control over the tendencies that caused him to commit the crime. It is no more rational to commit an individual to prison for a stated period of months or years than it would be to send a sick person to a hospital for a stated period of time, regardless of the help that he needed.

It is unfortunate that most of the prisons and penitentiaries, even in this twentieth century, are places for punishment rather than for reform. This condition is likely to con-

tinue as long as the workers in such institutions are selected because of their political pull and not because of their efficiency or fitness for their work. Society is frequently shocked by the scandalous reports of prison conditions. In order to correct the abuses it will be necessary for citizens to take a more active interest in the treatment of the unfortunates who are sent to prisons. Houses of correction, regardless of the title they receive, must be made educational institutions, where the inmates will have their characters strengthened until their impulses are ruled by the intellectual and moral powers. Much has been done during the past century to awaken the interest that is necessary in criminology and the care of prisoners by such writers as George Combe, whose books, "The Constitution of Man," and "Moral Philosophy," have been read by millions of people. The philosophy contained in these books is so fundamental and scientific that the suggestions given nearly a century ago can be applied today with the greatest profit. On the matter of educating the criminals in prisons George Combe says, on page 241 of "Moral Philosophy":

I consider that it would be highly advantageous to the criminals themselves to teach them Phrenology as part of their moral and intellectual instruction. Many individuals of average minds, who are untrained in mental philosophy, assume their own feelings and capacities to be the types and standards of those of all other men; and why should not the lowest class do the same? In point of fact they actually do so; and many of them believe that the portion of society which is out of prison is, at the bottom, as unprincipled, profligate, and criminal as themselves, only more fortunate and dexterous in avoiding temptation and detection. One means of correcting these erroneous impressions, and enabling such persons to understand their own dispositions, and the real relations in which they stand to virtuous men, and also of delivering their minds from the admiration of fraud, violence, obstinate pride, and many other abuses of the propensities, which at present they regard as virtues, would be to teach them the functions, the uses, and the abuses of every faculty, and particularly the peculiarities in their own cerebral organization, which render their perceptions unsound on certain points, and their proclivities in certain directions dangerous.

That our prisons have not yet become such ideal institutions of education is evident from remarks made by the President of the Chaplains' Association, at the Congress of the American Prison Association, held in Chicago a few years ago. He asks this pointed question:

What's in a prison that it should reform men? They are received, photographed, stripped, clipped, anointed, measured, numbered, tabulated by size, shape, scars, color, marks, moles and the unchanging papillary ridges of the finger tips. Arrayed in prison garb they are counted, marched, worked, watched whether awake or asleep, hustled along by keepers, lied about by fellow-convicts, forgotten by their friends, kept in silence and leading strings till they lose the power of initiative and forget the usages of the world.

At the same Congress Judge Arthur N. Sager spoke of the difficulty that the prisoner finds in getting re-established in society after leaving his place of confinement. Speaking of the penitentiary at Jefferson City, Missouri, he said:

We know that when the convict leaves these walls his picture, description and record will be catalogued in all the great cities of the land; that the trained sleuths of the law are constantly on the alert to pick him up, interrogate and inform upon him; that he is as timid and helpless as a bird just released from the cage; that he feels that every man who looks him in the face reads his prison number and record. We know, if his family is gone, his home destroyed and his friends have forgotten him, he is as a wild beast—hunted, feared and despised.

Many thoughtful people are making a careful study of the different phases of criminology and many reforms are being introduced to improve the conditions of prisoners while they are in the institutions of correction, and after they have served their terms. The indeterminate sentence already mentioned is an incentive to the prisoner to use his will power and the best tendencies of his life to control the mischief working impulses and thus hasten his release from prison. If he is in confinement for a sufficient length of time to form correct habits and to establish them so well that they are not likely to change easily after his release from prison he is no longer a danger to society and every citizen should show sufficient interest in his welfare to help him to live in a manner that will insure his freedom permanently.

Some individuals are so unfortunately organized that they do not seem to be able to develop the power of controlling themselves and therefore spend most of their lives in houses of correction. Persons who have such an unfortunate organization should not be punished for their misfortune. If it is necessary to keep them in an institution for public safety they should be given congenial employment because of its wholesome effect upon their organizations and be taught to

produce the necessities of life so that they will not become burdens upon society. In justice to such individuals and to itself society should not take revenge on such unfortunates but should develop the best that is within them and thus make life as tolerable and pleasurable for them as possible. It cannot be denied that such individuals have been placed at a disadvantage through a bad inheritance; hence any system of criminology that pretends to be scientific must give due consideration to such unfortunate organizations and help to adjust them by applying the principles of psychology and physiology. Oliver Wendell Holmes was not far from the truth when he said: "We are an omnibus in which all of our ancestors ride"; and again in his statement, "We are but the footing up of a double column of figures that goes back to the first pair. Some of them are plus, and some of them are minus, and if the columns do not add up right it is because we cannot make out all the figures." In the case of persons who have such unfortunate organizations that they seem to be given over hopelessly to their animal instincts and are lacking the intellectual and moral powers that should control their appetites and passions the cause of their trouble and the responsibility for the crimes extends back through many generations, and if any harsh measures were to be used the ancestors might have been justly made to suffer. The Kallikak family and the Jukes family are notorious examples of the influence of one generation upon others. It is stated that one of these families cost the state of New York one million two hundred fifty thousand dollars to care for the unfortunate members of five generations who were unable to control themselves. The study of eugenics, which has brought such conditions to public attention, is now being introduced in high schools, and will thus bring young people in contact with the causes of crime, so that they will be more interested in helping to make the social adjustments that are necessary to remove the conditions that produce crime. It is now generally believed among intelligent people that disease is preventable. The fact that some people go through life without suffering from sickness is an evidence that all could if the principles of normal living were universally practiced. The fact that a large per cent of the citizens in every country are not guilty of criminal acts is evidence that all might live above crime by the universal application of the normal laws of heredity, environment and self-mastery.

CHAPTER XXIV

CAUSES OF INSANITY

According to the reports of those who have given most attention to the study of insanity it is increasing to an alarming extent in the most civilized countries of the world. This is not as it should be. True civilization will reduce insanity, vice, crime, disease, poverty, and other abnormal personal and social conditions. Many misfortunes come to humanity individually and collectively because of the measuring of success by what people have, and not by what they are. The mad rush for wealth causes people to study almost everything but the laws of their own being, and how to live normally. Herbert Spencer has expressed in a forceful way the responsibility of individuals and their ancestors for this unfortunate condition when he says:

If anyone doubts the importance of an acquaintance with the fundamental principles of physiology as a means of complete living, let him look around and see how many men and women he can find in middle life, or later, who are thoroughly well. Occasionally only do we meet with an example of vigorous health continued to old age; hourly do we meet with examples of acute disorder, chronic ailment, general debility, premature decrepitude. Scarcely is there one to whom you put the question, who has not, in the course of his life, brought upon himself illness from which a little knowledge would have saved him. Here is a case of heart disease consequent on a rheumatic fever that followed a reckless exposure. There is a case of eyes spoiled for life by overstudy. Not to dwell on the natural pain, the gloom, and the waste of time and money thus entailed, only consider how greatly ill health hinders the discharge of all duties,—makes business often impossible, and always more difficult; puts the function of citizenship out of the question, and makes amusement a bore. Is it not clear that the physical sins—partly our ancestors' and partly our own—which produce this ill health deduct more from complete living than anything else, and to a great extent make life a failure and a burden, instead of a benefaction and a pleasure?

Although Mr. Spencer mentioned only the desirability of knowing physiology in order to preserve health it is now generally recognized by scientists and by the common people that

mind is an important factor in the cause and cure of disease. Marvelous progress has been made during the past century in improving conditions for the insane who have been kept in mental hospitals or insane asylums, but it is generally recognized that the progress in psychiatry has been less during the past century than of any other branch required by the physician. A book entitled, "Observations on Mental Derangement," written nearly a century ago by Andrew Combe, M. D., Physician to Queen Victoria and to the King and Queen of the Belgians, was based upon the anatomical and phrenological discoveries of Drs. Gall and Spurzheim, and is much more helpful today in the study and prevention of insanity than the large volumes on psychiatry that are now used in medical colleges. A few years ago Bernard Hollander, M. D., wrote a book entitled, "The First Signs of Insanity; Their Prevention and Treatment," that is full of helpful suggestions on the prevention of insanity that should be universally understood. If the causes are not removed the effects will be an unbalanced condition of mind that will finally land the unfortunate victims in some mental hospital. In the case of mental derangements, as in all other diseases, prevention is much better than cure. If the first signs of insanity were understood by everybody it would be possible to help the individuals suffering from mental derangements to overcome them through change of habit and environments, and thus make necessary adjustments without confinement in a mental hospital. In speaking on the prevention of insanity Dr. Hollander says, on page 143 of the book referred to above:

What can we do to prevent mental unsoundness in persons with a bad heredity or a distinct tendency? What can we do by way of treatment during an attack or in case of chronic mental weakness? How can we prevent the recurrence of an attack, and what shall we do with the incurables? These are the questions we have set ourselves to answer in the succeeding chapters.

To solve these problems satisfactorily, a knowledge of the human brain and its mechanism is most essential; secondly, a knowledge of practical psychology and human nature in all its varieties, which can only be gained by long experience; and thirdly, we must be acquainted with the manifestations of unsound mind and perversities of character.

Of all the organs in the human body, the brain ranks highest in importance; yet, strange to say, until about a century ago it received hardly any attention, and even at the present day the knowledge of its mental functions is still very obscure. Most of the knowledge of the functions of the brain is derived from experiments on living animals, which have produced valuable results for the neurologist who has to deal with disorders of motion and sensation; but they have produced next

to nothing of value to the psychiatrist, whose business it is to study disorders of the mind. Nor can it be wondered at, for even if the animal brain has the same correlation to psychical activities as the human brain, we cannot produce a thought or feeling at the point of the scalpel, and we must ever fail by this method to shed light on the nature of mental derangements.

All we need agree upon, for the present, is that there is a relationship between certain parts of the brain and certain psychical states and qualities. In my opinion, and I must insist on repeating it again and again, it is because of the non-recognition of this principle of the localization of mental functions that so little progress has been made both in the study and treatment of brain disease and mental disorder.

Many physiologists recognize only centers for movement and sensation, optical, acoustical, and other areas; but we must not forget that behind those sensory and motor centers there lie also the functions which constitute mental phenomena. The fact is overlooked that man has a much larger and by far more complicated brain than the lower animals, although he has not anything like the amount of muscular energy and power which many of them possess.

Until recent years it was believed that the shape of the skull had no relation to the shape of the brain. Now, however, there is not an anatomist existing who would deny that the size and shape of the skull is for all practical purposes a fair index of the size and shape of the brain. We have learned a great deal during recent years about the microscopical appearance of the brain in health and disease, but as regards the naked eye appearance of the brain, the relative value of the development of its different parts, there is still profound ignorance. The living head has interested the expert of brain and mental diseases so little that one would expect the organ of the mind was anywhere but in the head. Every attempt should be made to solve this problem of the mental functions of the brain. The treatment of insanity will not be perfect until we have acquired such knowledge. Such is my view based on a close study of the entire history of brain research from its origin at the end of the eighteenth century to the present day.

Parents are apt to attribute the breakdown of the health to educational over-pressure, but the fault lies much more often in the want of suitable education. Subjects are crammed into a child's head for which he has no actual capacity. If it is true of normal children, it is still more true of neurotic children that they require individual training as much as possible.

Besides the intellectual gifts, the characters and dispositions of children require to be carefully studied. Some are bold, others timid; some frank, others reserved; some rash, others cautious; some forward, others retiring; some active, others slow; and so on, each requiring special treatment. For many children of a nervous temperament, habits of system, order, punctuality, temperance, self-reliance, perseverance, and self-control may be their salvation in after-life. They require such moral education and character organization as will fit them to deal with the practical affairs of life, and enable them to do well when launched upon the business of the world.

Excessive emotionalism is a defect common to the greater number of children sprung from a neuropathic stock, and its development must at all costs be repressed.

Bad temper is frequent in neuropaths and unbalanced minds, and is very often the result of faulty education. The child who is overwhelmed with incessant reproaches, or who is thwarted uselessly and on all occasions, retires within himself and takes to brooding over his woes and disappointments; little by little he accustoms himself to melancholy, and later on he will be more inclined than others to pessimism, moral depression, and discouragement.

If the child grows up fairly normally, there comes a time when a profession will have to be chosen for him. Taking to the wrong profession or sphere in life may absolutely change the life, so that unsoundness of mind may result. A man always runs more risk if he spends his life doing uncongenial work, especially if he has an innate craving for something else. A square man in a round hole is much more likely to come to grief than one whose occupation fits his capacity. When we have to deal with a neurotic girl or young man inheriting insanity, it will be of the utmost importance that the career chosen should be one fitted to mental constitution, and that everything about them should be equally studied and regulated with the view of constantly warding off the threatened evil. The great considerations in choosing an occupation for the young are health, defects, aptitudes, special leanings, opportunities, powers of resistance, tendencies to special risks and temptations, and special intellectual, moral, or bodily strong or weak points. How many wasted lives would be saved, and how much unhappiness would be avoided if we could put every young man and woman into the groove for which nature has fitted them. Those who are in possession of real genius would not, as frequently happens now, be obligated to pine away their lives in a garret, and men would not longer be put to the learned professions who are scarcely fitted for driving a plough or scraping on a fiddle.

With many people it is idleness which leads to mental disorder. They have nothing to distract them from perpetual self-contemplation. While some men have too much work and mind-toil, others have too little, and lead an idle, aimless life, which either tends to bad and solitary habits and perhaps to drink, or fosters a habit of continual self-introspection and perpetual complaint that they are misunderstood. They may be independent, and have no longer need to work for a living; but such persons should be encouraged to take up some pursuit or hobby, to study some branch of science or art. Every such pursuit is an assistance to the neurotic and predisposed individual, and great will be the benefit gained from it. Not only ought the idle to have such occupation, but the busy and hard-worked man should have beyond his everyday task some amusement, pursuit or hobby to which he can turn as a relief from his daily round of business and find therein food and rest for his mind. Often busy men break down, simply because, apart from their business, they have no thought, no occupation, no mental amusement.

If everybody would try to help the individual who shows the first signs of insanity it would be possible to make adjustments that would overcome those abnormal tendencies, and would enable the individual to express life in a more normal

way. In a recent conversation with the superintendent of a large mental hospital he frankly admitted that there were many patients in that institution who could be well taken care of in their home communities if people were a little more sympathetic and tolerant to the views that may be eccentric but that would do nobody any injury. He stated further that during the great world war, when labor was scarce, some of the patients were humored in their peculiar ideas, and found no difficulty in securing work. Unfortunately, when a person in any community shows tendencies that are out of the ordinary, life is made unbearable by individuals who have no intention to do injury, but who are lacking the good sense and the toleration necessary to be helpful. The treatment that many individuals who are unbalanced in their minds receive in their communities and often in their own homes is unworthy of our boasted twentieth century civilization. It is in preventing insanity that the citizens can render their most helpful service, and there is no other science that will aid them as much in that important work as the observational psychology discovered by Drs. Gall and Spurzheim. Some of the most eminent superintendents of mental hospitals have testified that they could not have done justice to their patients without the help of that science. The following statements by Dr. W. A. F. Browne, made while he was Medical Superintendent of Montrose Asylum, is a sample of a number that might be quoted:

I have been acquainted with the principles of phrenology for upwards of ten years, and from proofs, based upon physiology and observation, I believe these to be a true exposition of the laws and phenomena of the human mind. During the whole of the period mentioned I have acted on these principles, applied them practically in the ordinary concerns of life, in determining and analyzing the characters of all individuals with whom I became acquainted or connected, and I have derived the greatest benefit from the assistance thus obtained. But although the utility of the science be most apparent in the discrimination of the good from the bad, those of virtuous and intellectual capabilities from the brutal and the imbecile, it is not confined to this. In the exercise of my profession, I have been enabled by the aid of phrenology to be of essential service in directing the education of the young as a protection against nervous disease, and in removing or alleviating the various forms assumed by insanity in the mature. For several years I have devoted myself to the study of mental diseases and the care of the insane. During my studies at Salpetriere, Charenton, &c., in Paris, I was able to derive great additional information from my previous knowledge of phrenology; and now that I have been entrusted with a

large asylum, I am inclined to attribute any little success that may have attended my efforts to ameliorate the condition of those confided to my charge, to the same cause.

The principles spoken of by Dr. Browne can be so simplified as to be understood by children six years of age, and there is no good reason why these principles of human nature should not be taught to children as early as the principles of plant and animal development, because the harmonizing of human tendencies is of the greatest importance to everyone. When all become familiar with the elementary powers of mind and the environments that are necessary to make them function in a normal manner people will be more considerate of each other and will help to produce harmonies rather than to create discords in the lives of individuals. When persons, through the lack of the application of preventive measures, become so unbalanced in their organizations that it is necessary to send them to a mental hospital, then it is of the greatest importance that those who have charge of them understand the operations of mind in normal and abnormal conditions, and how to make mental adjustments that will change discords into harmonies. It is generally conceded that medical colleges have not given sufficient attention to this special phase of professional training. Dr. George M. Baird, who has written some valuable works on the nervous system and how to care for it, makes this valuable suggestion in his book, "The Problems of Insanity":

The best thing to do with disease is to prevent it; the next best thing is to cure it when it first appears; the last and least important of all, is to attempt to cure its later stages, and it is with this last and least important duty that the asylums of the world are mainly occupied. The practical problem of the future is, how to educate physicians in the study of insanity so that they shall know its premonitory symptoms, and treat and cure it before it appears, or just after it appears. The insane must be treated before they are insane.

In medicine, as in education, the most advanced thinkers have adopted the discoveries of Dr. Gall as being the most scientific and helpful in understanding human nature in its normal and abnormal forms. One of the progressive teachers in a medical college, Dr. William Weir, of Glasgow, Scotland, said:

Being myself firmly convinced, after many years' study of the subject, and numerous observations, that phrenology is the true philosophy of

the mind, I have taught it, in my lectures to medical students, as the correct physiology of the brain; and I consider it impossible to give a proper view of the functions of the brain on any other but phrenological principles. I have, during the last five years, applied the principles of this science toward elucidating the nature and treatment of insanity.

The author of the present time who has done most to draw attention of the medical profession and of the public to the value of the practical psychology referred to above is Dr. Bernard Hollander, whose book on "The First Signs of Insanity," has already been mentioned. Another book that he has written, which has wielded a great influence in the scientific world, is "The Mental Functions of the Brain," in which he gives the clinical records of eight hundred cases of localized brain derangements and where he testifies that his localizations confirm those made a century ago by Dr. Gall and his scientific followers. The principles demonstrated by Dr. Hollander should be presented in simple language in the chapters on the nervous system in all text-books on physiology that are used in the public schools. There is great need of teaching the elementary principles of mind and their connection with the nervous system to every pupil in our public schools. By teaching psycho-physiology in our schools the interest of children would be much greater than in the ordinary physiology as it is now taught, and the information they would gain would be of the greatest value to them throughout life. If this study were enlarged to include the observational method of analyzing character it would give teachers a better knowledge of their children and would help children to understand themselves. The value of the practical psychology recommended was tested by Elizabeth P. Peabody and Mrs. Horace Mann more than half a century ago when they introduced the kindergarten into America. In their book, "Moral Culture of Infancy," page 195, they give practical demonstrations of the methods they used to teach to children subjects for which they had very little talent. Their ideas are well expressed in the following:

We find a very great difference in children in regard to arithmetic. We have had one scholar who never could go (she died at fifteen) beyond a certain section in "Colburn's Mental Arithmetic." She reached that after repeated trials; for when we found her grounded at any special point, we always turned back and let her review, and in that way she would gain a little at every repeated trial. This child found geometry easier than numbers, and mastered "Grund's Plane Geometry." She could also write out a reminiscence of Dr. Channing's ser-

mons, or remember anything interesting in history, natural history, or anything of an ethical character. We also had one gifted little scholar who could not learn to spell accurately; but she drew with great power and beauty,—with “an eye that no teaching could give,” as was said of her by a fine artist. These discrepancies in talent are very curious. Phrenological philosophy alone explains them.”*

Many of the foremost scientists of the past century recognized the great loss that humanity has sustained by the neglect of adopting universally the practical psychology discovered by Dr. Gall. Alexander Bain, whose books on psychology and education are of as high a character as those of Herbert Spencer, stated in the preface of his book “On the Study of Character, Including an Estimate of Phrenology”:

The present work is intended, if possible, to reanimate the interest in the analytical study of human character, which was considerably awakened by the attention drawn to phrenology, and which seems to have declined with the comparative neglect of that study at the present time. There is nothing more certain, than that the discriminating knowledge of individual character is a primary condition of much of the social improvement that the present age is panting for. The getting the right man into the right place is mainly a problem of the judgment of character; the mere wish to promote the fitting person is nugatory in the absence of the discrimination.

Our further progress in the knowledge of character must proceed in great part from more searching inquiries into the human mind. Phrenology has done good service, by showing with more emphasis than has ever been done before, that human beings are widely different in their mental tastes and aptitudes, and by affording a scheme for representing and classifying the points of character, which is in many respects an improvement upon the common mode of describing individual differences. It is to be wished that a certain portion of the scientific intellect of our generation would devote itself to the promotion of a branch of knowledge that concerns our welfare no less than astronomy, geology, or mechanics.

The course here pursued is, first, to give a critical examination of Phrenology, as being the only System of Character hitherto elaborated, and then to lay out the subject according to the plan deemed on the whole the best. The Phrenological partition of the mind, if not accepted by all philosophers, is well known to the general public.

(* Since these letters were written, the Williams Secular School, established in Edinburgh by George Combe, Esq., and in which that distinguished man taught personally during the latter years of his life, has proved conclusively that the phrenological philosophy is a fine basis for education. The principles there practiced are, to cultivate assiduously those faculties which were found naturally deficient in the pupils; thus aiming to make whole men out of what otherwise would have been but fragments of men.)

Dr. Frank Lydston has based his excellent book entitled, "Diseases of Society," upon the discoveries of Gall, and has devoted one chapter to a consideration of this great pioneer in criminology and practical psychology, in which he says:

Although published more than one hundred years ago, to become the grazing ground upon which numbers of scientific thieves have gained great reputations, Gall's work in cerebral localization has never received the appreciation it merited. Dr. Bernard Hollander is the most enthusiastic of the few psychiatrists who have endeavored to do justice to the great anatomo-psychologist, who was the first to really dissect the brain and to whom credit for the discovery of even the speech and optic centers justly belongs. Hollander's work is one of the most interesting and important recent contributions to psychiatry. Many psychiatrists have spurned Gall and all his works and, whilst repudiating him have coolly appropriated the products of his master mind.

The originality and boldness of Gall are shown by the striking fact that he was not only the father of psychology, cerebral anatomy, and cerebral localization, but the pioneer who foreshadowed the coming of modern criminology. He has certainly been vindicated in many respects. His localization of the speech and optic centers was afterwards verified and appropriated by others. Broca's name will be immortal through his appropriation or rediscovery of the speech center, localized by Gall many years before. Reil gleaned most of his "original" ideas from Gall's demonstrations.

In view of the abundance of clinical evidence in support of Gall's views of cerebral localization, it is somewhat remarkable that his ideas have been permitted to be practically monopolized by charlatans, quacks and literary pirates. Whatever may be said of him as an extremist, the reflective mind cannot but appreciate the vein of truth and practicality that permeates his work. His plates of the brain have never been surpassed, and the thoroughness and conscientiousness of his work are unimpeachable. It is remarkable, but none the less true, that the trend of modern criminology is in the direction of the theories of cerebral localization laid down by Gall. Consciously or unconsciously, moreover, there is more resemblance between some of the points that modern criminologists are endeavoring to make and the theory of phrenology than most scientists are willing to acknowledge. That Gall was a philosophic criminologist is shown by the following excerpt from his work: "There can be no question of culpability or justice in the severe sense; the question is of the necessity of society preventing crime. The measure of culpability and the measure of punishment cannot be determined by the study of the illegal act, but only by a study of the individual committing it."

CHAPTER XXV

DR. GALL AND HIS DISCOVERIES

After studying the discoveries of Dr. Gall and the application of them in various lines of human activity it is interesting to examine the works of the most progressive authors in education, psychology, criminology, sociology, etc., and to see how much they are indebted for their inspiration to this eminent discoverer. Dr. Gall's experience has been similar to that of all other pioneers in human culture. In the beginning only the most advanced thinkers and progressive scientists accepted the discoveries and used them to improve the condition of criminals, the insane, and other defective human beings, while doing constructive social welfare work that would gradually remove the causes of vice, crime, disease, and other abnormal conditions. The conservatives opposed these discoveries, as they did those of Harvey and other discoverers who presented new truths concerning the human organism. The opposition to Gall's discoveries lessened and among certain classes where it was most pronounced in the beginning it has entirely ceased. Although many recent writers in education and psychology do not use the terminology that was developed by Dr. Gall and his scientific followers they use the philosophy of life that was discovered by them. Recent text-books on criminology and education give much more credit to Gall, Spurzheim and Combe than did those that were written on the same subjects twenty-five years ago. The tendency of the present time is to break away from the speculations and theories that played such a large part in the civilization of the past and to apply the practical principles of science that will gradually establish more ideal conditions.

Recent books based upon the principles of psychology that have been developed from Gall's discoveries treat the subject in a popular way and usually show its relationship to business life rather than to the educational world. Subjects that are of sufficient importance to form a part of every individual's education should be introduced into the public schools. We

have therefore called attention to the relationship of Gall's discoveries to education, believing that when progressive educators become familiar with them they will see the advantage of making them a part of twentieth century education.

Space will not permit giving a full account of the discoveries of Dr. Gall and their history. Dr. Andrew Boardman has given a brief account of these discoveries, mainly in the language of Dr. Gall himself, from which we quote the following:

It is proper, on this occasion, that we should hear the discoverer of the phrenological doctrines on the method he pursued in arriving at his conclusions. After narrating the observations by which he was led to investigate the functions of the brain, he says: "For a long period I continued my researches as I had begun them—urged on solely by my fondness for observation and reflection. Abandoning myself to chance, I gathered for several years all that it offered me. It was not till after having accumulated a considerable mass of analogous facts, that I felt myself in a state to range them in order. I perceived successively the results, and at length had it in my power to go to meet observations and multiply them at pleasure.

"I gathered innumerable facts in schools, and in the great establishments of education; in the asylums for orphans and foundlings; in the insane hospitals; in houses of correction and prisons; in judicial interrogatories; and even in places of execution: the multiplied researches on suicides, idiots and madmen, have contributed greatly to correct and confirm my opinions. I have laid under contribution several anatomical and physiological cabinets; I have submitted antique statues and busts to examination, and have compared with them the records of history.

"After having used, for more than thirty years, such diversified means, I no longer feared the danger or the reproach of having precipitated the publication of my great work. I had more reason to apprehend, that the great number of proofs I had furnished in support of each of my propositions, instead of being satisfactory, would prove to the great body of my readers equally alarming."

To show with more particularity the assiduity and carefulness with which Dr. Gall pursued his observations, I will give an extract, showing the history of the discovery of the organ of combativeness. "I collected in my house," says Gall, "quite a number of individuals of the lower classes of society, following different occupations; such as coachmen, servants, &c. I obtained their confidence and disposed them to sincerity by giving them beer, wine, and money; and when favorably inclined, I got them to tell me of each other's good and bad qualities, and most striking characteristics. In their different communications, they seemed to notice particularly those who were always provoking disputes and quarrels. Individuals of peaceable habits they knew very well, speaking of them with contempt, and calling them poltroons. As the most quarrelsome found great pleasure in giving me circumstantial narratives of their exploits, I was anxious to see whether anything was to be found in the heads of these bravos, which distinguished them from those of the poltroons. I ranged the quarrelsome ones on one side, and the

peaceable on the other, and examined carefully the heads of both. I found that in all the former, the head, immediately behind and on a level with the top of the ears, was much broader than in the latter. On another occasion, I assembled separately those who were most distinguished for bravery, and those most distinguished for their cowardice. I repeated my researches, and found my first observations confirmed. It was impossible for me to be deceived by the false ideas of philosophers, on the origin of our qualities and faculties. In the individuals I had to deal with, education was entirely out of the question, and the manner in which their character was manifested, could not be attributed to the influence of external circumstances. Such men are the children of nature, yielding themselves unreservedly to their dispositions, and all their actions bearing the imprint of their organization.

"I therefore began to conjecture that the disposition to quarrel might really be the result of a particular organ. I endeavored to find out, on the one hand, men of acknowledged superior bravery, and, on the other, men known to be great cowards. At the combats of wild beasts, at that time still exhibited in Vienna, there often appeared a first-rate fighter of extreme intrepidity, who presented himself in the arena, to sustain alone a fight with a wild boar, or a bull, or any ferocious animal whatever. I found in him the region of the head just pointed out, very broad and rounded. I took a cast of this head, and likewise those of some other bravos, that I might run no risk of forgetting their particular conformations. I examined also the heads of some of my comrades, who had been expelled from several universities, for duel-fighting. One of them knew no greater pleasure than that of sitting down in an ale-house, and mocking the workmen who came thither to drink; and when he saw them disposed to come to blows, putting out the lights, and giving them battle in the dark, chair and hand. He was, in appearance, a small and feeble man. He reminded me of another of my comrades, a Swiss, who used to amuse himself at Strasburg, by provoking quarrels with men much larger and stronger than himself. I visited several schools, and had pointed out to me the scholars who were the most quarrelsome, and those who were the most cowardly; and I prosecuted the same observations in the families of acquaintances. In the course of my researches, my attention was arrested by a very handsome young woman, who, from her childhood, had been fond of dressing herself in male attire, and going secretly out of doors to fight with the blackguards in the streets. After her marriage, she constantly sought occasion to fight with men. When she had guests at dinner, she challenged the strongest of them, after the repast, to wrestle. I likewise knew a lady, who, although of small stature and delicate constitution, was often summoned before a justice, because of her custom of striking her domestics of both sexes. When she was on a journey, two drunken wagoners, having lost their way in the inn during the night, entered the chamber where she was sleeping alone; she received them so vigorously with the candlestick, which she hurled at their heads, and the chairs with which she struck, that they were forced to betake themselves to flight. In all these persons, I found the region in question formed in the manner above described, although the heads in other respects were formed quite differently. These observations emboldened me, and I began thenceforward to speak in my lectures of an organ of courage, as I then called it.

"There soon after died a general, whose whole reputation was founded

on his courage and love of fighting. I found his head shaped as it is in the first-rate fighter at Vienna, spoken of above. My entire conviction was finally achieved by the cranium of the poet Alxinger, who was so destitute of courage, that his cowardice exposed him to considerable railery. Comparing his cranium with the preceding, what a difference in the development of this region! The general's cranium, besides being very broad immediately behind the ears, also presents a round protuberance an inch in breadth. Alxinger's cranium, on the contrary, is not only very narrow in this place, but entirely flattened."

Such is the testimony of this extraordinary man in relation to the investigations which formed the foundation of his discoveries.

This appears to be the appropriate place for introducing a few observations on the founder of phrenology as a corrective of those erroneous notions of his character, which have gone abroad concerning him on the authority of ignorant or prejudiced opponents. To show the disinterestedness of his objects, it may be remarked that Dr. Gall, though possessing a very high and profitable practice, kept himself poor by spending on his phrenological inquiries all he gained, after defraying necessary expenses. As early as 1802, in his petition and remonstrance to the Imperial Government of Lower Austria, against an order issued by the command of the Emperor of Germany, prohibiting him from lecturing on the functions of the brain, Gall says, in setting forth the consequences of this prohibition: "To this perilous injury to my reputation, involving the loss of all the advantages arising from the hard-earned confidence of the public, must be added a consequence deeply affecting my interest. My collection of plaster casts, of the skulls of men and animals, and of the brains of men and animals in wax, has cost me about seven thousand gulden; and I have already made very expensive preparations, exceeding in amount fifteen thousand gulden, for a splendid work on the functions of the brain, which has been universally demanded of me: this property will be rendered useless by destroying my reputation." This petition and remonstrance had no effect on the government of Austria, and Gall had to choose between the relinquishment of a very profitable medical practice and the ties of country, on the one hand, and the curtailment of his exertions to promote a knowledge of the physiology of the brain on the other. He chose the former, and left Vienna for ever.

In the "*Physiologie Intellectuelle*" of Dr. Demangeon, is contained the testimony of men of high celebrity, who speak from personal knowledge, both as to the character and doctrines of Gall.

"The worthy Reil," says Professor Bischoff, "who, as a profound anatomist and judicious physiologist, has no need of my praise, rising above all narrow and selfish prejudices, has declared 'that he has found more in Gall's dissections of the brain than he could have believed it possible for any one man to discover in his whole life.'"

"Loder," continues Professor Bischoff, "who certainly yields to no living anatomist, thus estimates the discoveries of Gall, in a friendly letter to my respected friend, Professor Hufeland: 'Now that Gall has been at Halle, and I have had an opportunity, not only of listening to his lectures, but also of dissecting with him, either alone or in the company of Reil and several of my acquaintances, nine human brains, and fourteen brains of animals, I think I am able, and have a right to have an opinion as to his doctrines.'

"I say, then, that I agree with you concerning organology, without, however, believing it to be at all contradictory to anatomy, being convinced that in respect to its grounds and principles, it is true. The skulls of Schinderhannes, and six of his accomplices, were lent to me by Ackermann, of Heidelberg. They presented a striking harmony with the craniological indications of Gall. In the presence of S., with whom the little H., of Jena, lived, who, after stealing several times, drowned herself in the Saale, Gall gave such an exact description of her character from a mere inspection of her skull, (which I had secretly procured, and which no one knew I had,) that S. was really amazed when I revealed the secret. There was no chance about this, and I may say the same of several other cases."

The discoveries in the brain, made by Gall, are of the highest importance, and several of them possess such a degree of evidence that I cannot conceive how any one, with good eyes, can overlook them. I speak particularly of ———. (Here follows a list of some of Gall's anatomical discoveries.) These discoveries alone would be sufficient to render Gall's name immortal; they are the most important that have been made in anatomy since the discovery of the absorbent system. The unfolding of the convolutions is a capital thing. What progress have we not a right to expect from a route thus opened! I am dissatisfied and ashamed of myself for having, like others, for thirty years, cut up some hundreds of brains as we slice cheese, and for having failed to perceive the forest by reason of the great number of trees. But there is no use blushing and fretting. The best thing we can do is, to listen to the truth, and learn what we are ignorant of. I acknowledge with Reil, that I have found more than I deemed it possible for a man to discover in a lifetime.

Professor Hufeland says: "It is with great pleasure and much interest that I have heard this estimable man (Gall) expound his new doctrine. I am fully convinced that it ought to be considered one of the most remarkable phenomena of the eighteenth century, and one of the boldest and most important advances that have been made in the study of nature.

"One must see and hear, in order to learn that the man is entirely exempt from prejudice, charlatanism, deceit, and metaphysical reveries. Endowed with a rare spirit of observation, with great penetration and sound judgment—identified, so to speak, with nature, and deriving confidence from his constant intercourse with her, he has collected, in the class of organized beings, a multitude of indications and phenomena never before observed, or which had been observed superficially, only. He has compared them ingeniously, discovered the relations which establish an analogy between them—has learned their significations, deduced consequences, and established truths, which are the more precious for being invariably founded on experience, and flowing from nature herself. To this labor he is indebted for his views of the nature, relations, and functions of the nervous system."

Gall was not the first scientist to associate mental functions with brain centers, or to localize the functions of the brain, as it is usually termed, but the efforts before his time were not in harmony with nature, and had very little value in de-

veloping the true science of mind. The previous localizations were made through imagination, while Dr. Gall discovered his step by step through observation and experimentation. In speaking of the plurality of the cerebral organs a writer who summarized the discoveries of Gall said:

This plurality is not, by his own confession, a new idea, or peculiar to him; the ancients admitted three kinds of mind, each having a particular seat. The cerebrum had long been regarded as the organ of the perception or attention, and the cerebellum as that of memory. "St. Gregory, of Nice," says Gall, "compared the brain to a city, in which the going and coming of the inhabitants caused no confusion, because each set out from a fixed point, or arrived at a determinate spot." The Arabs also considered the first anterior ventricle of the brain, as the seat of common sense; the second, as that of imagination; the third, as that of judgment; the fourth, as that of memory. A sketch of a head by Albert the Great, in the thirteenth century, has reached us, which gives nearly the same location to the faculties, &c., as the above.

In the succeeding centuries, many authors treated on the same subject, and one of them published an engraving in which were represented the seat of common sense, of imagination, of reason, of memory, &c.

After the revival of letters, many of the most learned anatomists and naturalists entertained ideas similar to those of Gall, on the plurality of the organs of mind. Among these, were Willis, Vieussens, Haller, Van Swieten, Bonnet, Mayer, &c. Hence, some writers who wished to deprive Gall of all credit, have made use of these facts, to deprive him of the honor of his discoveries; but, he was always more solicitous to establish his system on solid foundations, than to defend its priority, and therefore wisely endeavored to accumulate proofs which were far more conclusive than the opinions of the learned men just alluded to.

The limits I have assigned to this work not permitting me to follow him into the details he has given, I will conclude with the following summary of them: that wherever the cerebral faculties differ, there is also a difference in the structure of the brain, and in all cases where they are similar, all the differences that exist arise merely from the intensity of the propensities, &c.; that the number of the faculties is always proportionate to the number of the convolutions, and that the energy of the former always corresponds to the development of the latter.

That the convolutions situated beneath the frontal bone in man, and in which are evidently seated his characteristic faculties, are wanting in animals, or exist in a rudimental form in exact proportion to the feebleness of these faculties in them; whilst those situated on the lateral and posterior parts of the head, and which are the seat of the animal faculties, appear analogous to those found in the same situations in animals; that the epoch when each faculty begins to appear, always corresponds to the development of the convolution shown to be the organ of this faculty; that the over-exercise of a single faculty of the mind does not fatigue the whole brain, but that the sense of weariness is felt in one spot only; that the hypothesis of the identity of brains is opposed to the evidence of facts, and to all intellectual physiology, supported as this latter, by the most unanswerable results. Finally—Gall has deduced a series of facts of another character, from the numerous

pathological observations on lesions of the brain collected by him, and which may be regarded as additional proofs, as most of these facts are only explained by a plurality of organs, but are wholly inexplicable, if the brain be considered as a unit.

In addition to this, it should be borne in mind, that in all other parts of the body, each function is provided with its peculiar and appropriate organ; why, therefore, should the brain form an exception to this general law? It is repugnant to reason, to suppose that an aptitude for the arts, a talent for music, and for calculation, an instinct for the perpetuation of the species, a propensity to accumulate, a love of destruction, benevolence, veneration, &c., all emanate, pell-mell, from a part of the organization that nature has carefully enclosed in a solid case, with the evident intention of protecting it from everything that might be inimical to its functions; and it is equally absurd to assert that an organ whose external structure is so delicate and admirable is a mere unformed and chaotic mass.

We are giving the illustrations of brain localization back as far as the thirteenth century, and the reader will see from these that memory is located in the cerebellum, or back brain; cogitation, above; imagination and fancy are not far from where they are located at the present time according to the best evidence that it has been possible to obtain. Common sense is located where the reasoning faculties and intuition are now known to be. In one of the illustrations there are lines showing the connection of sight, hearing, taste and smell, with common sense. This crude beginning, when compared with the localizations as shown in the illustrations here given of the work of Gall, is evidence that his discoveries are a wonderful advance over anything that existed before Dr. Gall discovered the following twenty-seven faculties:

- No. 1. The instinct of generation.
2. The love of offspring.
3. Friendship, attachment.
4. Courage, self-defense.
5. Murder, the wish to destroy.
6. Cunning.
7. The sentiment of property.
8. Pride, self-esteem, haughtiness.
9. Vanity, ambition.
10. Cautiousness, foresight, prudence.
11. The memory of things, educability.
12. Local memory.
13. The memory of persons.
14. Verbal memory.
15. Memory for language.
16. Colors.
17. Music.
18. Number.

19. Aptitude for the mechanical arts.
20. Comparative sagacity, aptitude for drawing comparisons.
21. Metaphysical depth of thought, aptitude for drawing conclusions.
22. Wit.
23. Poetry.
24. Good nature.
25. Mimicry.
26. Theosophy, religion.
27. Firmness of character.

Dr. Gall's discoveries are explained in his large work, "The Anatomy and Physiology of the Nervous System in General, and of the Brain in Particular," four large volumes with an Atlas of 100 plates. Dr. Spurzheim was associated with Dr. Gall in preparing a portion of this work for publication. The price of the four volumes and atlas was 1000 francs, or about \$200.00.

Dr. Gall is also author of six volumes entitled, "On the Functions of the Brain, and of each of its Parts." These were translated from the French into English by Winslow Lewis, Jr., M. D., of Harvard University, who gives the following testimonial in favor of phrenology, which was sent to Dr. Andrew Boardman:

It gives me much pleasure that you are engaged on a subject which—viewing it, as I do, as the most satisfactory expositor of the science of the mind—is of the first importance. My belief in the correctness of its principles is based on deductions which are the results of some considerable experience. I have found its theory borne out by facts; and on tests thus supported by evidences from nature, my convictions are established in favor of phrenology.

Francis Joseph Gall was born at Tiefenbrunn, in Wurtemberg, March 9, 1758. He died at Mont Rouge, near Paris, on August 22, 1828. His father, who was a tradesman, placed him while he was very young, under the care of one of his uncles, in the Duchy of Baden, that he might begin his education; Gall afterwards went to Strasburg, to study medicine, and afterwards to Vienna, where he was admitted to medical practice and practiced as a physician until the year 1805, when he traveled in the north of Germany, teaching his new doctrine. He arrived in Paris in 1808, where he continued until his death, the practice of his profession, and taught and published the various results of his researches.

An attentive examination of the cranium of this celebrated man, who was remarkable for his great intellectual capacity, gave the following facts: that among the organs most highly developed, were those situated at the anterior and superior part of the forehead, as the faculty of comparison, of mirth, of causality, but above all, of benevolence. At the summit and sides of the head, the organs of firmness and perseverance, caution and reserve, were very prominent, and although he has been accused of duplicity, his nearest friends never remarked anything in him that really merited that name. The sexual propensity was also very strongly marked by the great size of the occiput. At the anterior and inferior part of the forehead, those of eventuality and speech were moderate. Finally, those of colors, tune, number, construction, and especially ideality, were very small, this latter so much so that he had a kind of antipathy to versification of all kinds. All the other organs were moderate. The appearance of prominence in that of locality was caused by a corrugation of the skin, produced by his habit of deep thought.

To this may be added, a strong constitution, some corpulence, and imposing height; a gravity and energy in his movements, great earnestness and penetration in his look, his forehead often with a troubled expression, and his general expression rather serious than gay; always calm and circumspect; never indulging in loud laughter, but sometimes in an ironical smile, mingled with an expression of irony about his mouth and nostrils; a fine forehead, a somewhat prominent chin, a full face; a clear skin and fresh complexion, large lips, and deep rather than violent passions. The expression of his thoughts was always clear, precise, frequently picturesque, and sometimes authoritative. In his lectures the simple exposition of facts was the ordinary theme of his discourse; but in conversation and discussion, his favorite figures were interrogation, irony, and pre-supposition; the motion of his limbs and the attitude of his body were very awkward, but the tone of voice, the accent and the air of his head and physiognomy were very expressive. Finally, a certain fund of good nature redeemed some fits of humor a little overhasty, and certain expressions which were neither sufficiently softened nor innocent not to produce some excitement.

It is evident from this, that in the sense which he attached to the word philosophy, Gall has a head in the highest degree philosophic. He was, in fact, ingenious in discovering the

signs of eternal truths. He had an astonishing acuteness in penetrating things and seizing them in a point of view fertile in useful results. He possessed the organization necessary to fully appreciate human nature, and to lay the foundation of a true philosophy of man.

CHAPTER XXVI

JOHN GASPER SPURZHEIM, M. D.

The most eminent student of Dr. Gall was Dr. Spurzheim, who was associated with him in his work for a number of years and was co-author with him of the large work on the brain and nervous system. Dr. Spurzheim was author of a number of books. The best known of these are: "Education; its Elementary Principles Founded on the Nature of Man"; "Phrenology, in Connection with the Study of Physiognomy"; "Phrenology, or, The Doctrine of Mental Phenomena," which was published originally in two volumes, and was republished a few years ago in one large volume; "Observations on the Deranged Manifestations of Mind, or, Insanity"; and "Anatomy of the Brain, with a General View of the Nervous System." This anatomy was translated from the unpublished French manuscript by Dr. R. Willis, Member of the Royal College of Surgeons, London; and the First American Edition was revised by Charles H. Stedman, M. D., Physician and Surgeon of the United States Marine Hospital at Chelsea, Massachusetts. In the introduction Dr. Stedman paid the following tribute to the discoveries of Gall and Spurzheim:

In presenting to the public an American Edition of Spurzheim's "Anatomy of the Brain," the editor feels that the opportunity now offering should not be allowed to escape without adding his testimony to the facts herein advanced—facts which have gone farther to establish, elucidate, and perfect the physiology of the brain than any discoveries ever before made. What Harvey, Hunter and Linnaeus, in their several researches into the animal kingdom, have effected, the same have Gall and Spurzheim accomplished;—the establishment of a foundation on which will rest all subsequent discoveries in their respective branches of science.

But, alas, all this good acquired and bestowed has not always met with that applause and cordiality of reception which was its due. Who does not know with what indifference and neglect the facts observed and proclaimed by the immortal Harvey were treated—who lived to see scarcely a solitary convert to his opinions? The facts and observations of Hunter were subjected to nearly similar contumely and incredulity. So has it been with Gall and his no less illustrious associate. It would

have been astonishing had not their labors likewise been held up to the world as profitless and vain. How, may it be asked, could Gall and Spurzheim expect to escape censure, with the fate of Galileo, Harvey, and other philosophers, before their eyes? The history of science swells with the multiplied accounts of the persecution and neglect of its successful devotees; so much so in fact, the value of a discovery or invention would seem to be in the ratio of the abuse and indignity heaped upon it.

Though both Gall and Spurzheim lived through much reproach, yet long before death they enjoyed the bright satisfaction of witnessing the rapid march of their discoveries. Concessions to the truth of their observations poured in upon them from all quarters; slowly, indeed, but with a steady and increasing progress. France has honored Gall, as she should, with that generous regret she always bestowed upon the remains of those who have honored her. Great Britain and New England, who knew Spurzheim well, have striven to do justice to his character and remains, by wiping away the obloquy and reproach cast upon his successful labors, and by bestowing on him the highest and only honors the living can heap upon the dead.

Already does phrenology number among its advocates in Great Britain some of the most scientific men of that country; and its march has been such that the Reviews and Magazines, once so bitterly opposed to "German fancies," to Spurzheim and his doctrines, have joined themselves to his friends and heartily repent of their former inveterate hostility.

As to the comparative merits of these two great men, it may be proper to subjoin the following extract from the *Edinburgh Phrenological Journal*, No. 6, pages 189-90: "As Newton was the first to establish on a firm and solid basis the connection of physical with mathematical science, so Gall has been the first to demonstrate on proper principles a connection between physical qualities and the manifestation of mind. La Place verified, illustrated and perfected the discoveries of Newton; and Spurzheim has verified, illustrated and brought to a state nearly as perfect the discoveries of Gall." Again, as to the respective value of their writings: "When we enter upon a perusal of Gall we feel as if we were in a country abounding with objects of the most striking sublimity and rich in all the dread magnificence of nature. We wander untired through the boundless variety and we perceive in every new scene something to excite our wonder and admiration. In the works of Spurzheim, on the other hand, we feel as in a garden; where all is regular and orderly; where all the different productions of nature are placed in an exact scientific arrangement where we may study them leisurely and at our ease, and where we may see brought together in a comparatively small space the product of every zone and of every climate in the known world."

Again in No. 9, page 107: "In his own (Gall's) science he never can have a rival.—A man who is to be named only with the Harveys and Galileos, and Newtons, has nothing to dread from any competitor; and in his own department there never can be found any equal. The second place has certainly been occupied by Dr. Spurzheim, and as Dr. Johnson has remarked of Milton in regard to epic poetry, so it may be said of Dr. Spurzheim, that he is not the greatest of phrenologists, only because he is not the first. His contributions to the science betoken powers of the very first order, and his services to phrenology no possible circum-

stance can ever make us forget or undervalue, nor will posterity ever forget or undervalue them.”

It does not belong to us here, nor is there space to point out the particular share that Gall or Spurzheim had in the anatomical portion of this work. The author has given Gall, as far as practical utility demanded, all the credit due him and has taken nothing upon himself that was not rightfully his own.

No one will question the unparalleled skill, ease and perspicuity with which Spurzheim laid open to his anatomical classes the heretofore mysteries of the brain. In Boston, where we had been accustomed to the ancient method of exposing or rather keeping out of view the structure of the cerebral masses by slicing the brain, each demonstration of Spurzheim seemed to his attentive audience as a ray of light beaming through the mist, and dispersing the bewildered haze in which the subject had been before enveloped. We had heard, indeed, that something of the kind had been accomplished by the same Spurzheim in Europe; but the strength of our incredulity had not been put to the test. The presence of this genuine anatomist actually demonstrating the brain, and displaying its organization had not hitherto been granted us. At length, however, he came and taught until with most, if not all his auditors, unbelief and prejudice began to vanish by degrees, and the consciousness of truth to reign in their stead. No one then present can say in sincerity that he was not instructed; but rather, with the exception of perhaps two or three, all will pronounce themselves not only instructed but converted.

The proof of the extension of Spurzheim's views in this country may be found in the sale of his works, and in the continued call for further editions. This edition of his “Anatomy of the Brain” may be considered somewhat in the light of a Second American Edition; there having been 250 copies ordered by himself from England, which arrived after his death, all of which have been sold. Not only professional men and anatomists are anxious to obtain the “Anatomy of the Brain,” but the scientific lovers of truth not of the profession likewise desire to examine the validity of the facts embraced in the work. So far as this has been done conviction as to the grand points has followed. For my own part, being so situated as to enjoy frequent opportunities for dissecting the brain, I have carefully investigated the cerebral masses according to this mode of examination. By this method (and there seems to be no other systematic course) the true structure of the brain from its commencement in the medulla oblongata to the termination of its diverging fibers by which all parts are brought into perfect connection, is discovered; together with the reinforcement of these fibers and their successive additions by means of the gray substance distributed throughout all parts of the cerebrum and cerebellum. Thus the fact of the plurality of organs in the brain is established together with their constant intercommunication.

If with the knowledge of this important anatomical disposition of the cerebral organs we now connect with the multiplied and multiplying facts derived from the examination of the interior of the cranium and also the observations made upon the intellectual and affective faculties of man, together with the state of the brain and mental manifestations in disease of that organ, we cannot easily avoid the conclusions arrived

at by Gall and Spurzheim, that the faculties of the mind are innate and that they possess a habitation in the brain well characterized and defined.

The classification of mental phenomena given by Spurzheim is more complete and philosophical than the final classification made by Dr. Gall, whose whole life was devoted to discovering the relationship that exists between brain and mind, so that he had very little time to develop a philosophy out of his discoveries. Drs. Gall and Spurzheim, from the beginning of their discoveries, emphasized the practical phase of their work, and applied their psychology to all phases of human improvement. The fact that one of the leading publishers of America reprinted Spurzheim's work on "Phrenology, or, The Doctrine of Mental Phenomena," in 1908, without revision, and gave to the world a book that is in harmony with the most recent discoveries in physiology and psychology, shows that he was a fundamental thinker and worker. A number of the elementary powers of mind have been discovered since the time of Dr. Spurzheim, but as far as his discoveries and philosophy went there was very little occasion to revise it. His classification is given here:

SPECIAL FACULTIES OF THE MIND

Order I.—Feelings, or Affective Faculties.

Genus I.—Propensities.

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|--------------------------|---------------------|
| Desire to Live. | 4. Adhesiveness. |
| Alimentiveness. | 5. Inhabitiveness. |
| 1. Destructiveness. | 6. Combativeness. |
| 2. Amativeness. | 7. Secretiveness. |
| 3. Philoprogenitiveness. | 8. Acquisitiveness. |

9. Constructiveness.

Genus II.—Sentiments.

- | | |
|--------------------|------------------------|
| 10. Cautiousness. | 16. Conscientiousness. |
| 11. Approbateness. | 17. Hope. |
| 12. Self-esteem. | 18. Marvellousness. |
| 13. Benevolence. | 19. Ideality. |
| 14. Reverence. | 20. Mirthfulness. |
| 15. Firmness. | 21. Imitation. |

Order II.—Intellectual Faculties.

Genus I.—External Senses.

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|-------------------|----------|
| Voluntary Motion. | Smell. |
| Feeling. | Hearing. |
| Taste. | Sight. |

Genus II.—Perceptive Faculties.

- | | |
|-----------------------------|--------------------------|
| 22. Individuality. | 28. Order. |
| 23. Configuration. | 29. Calculation. |
| 24. Size. | 30. Eventuality. |
| 25. Weight, and resistance. | 31. Time. |
| 26. Coloring. | 32. Tune. |
| 27. Locality. | 33. Artificial Language. |

Genus III.—Reflective Faculties.

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|-----------------|----------------|
| 34. Comparison. | 35. Causality. |
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CHAPTER XXVII

PROGRESS OF PHRENOLOGY

Phrenology made its greatest progress in France during the early period of its history. The Phrenological Society of Paris consisted of 144 members, who were mostly of the learned professions, and included some of the best known physicians in Paris. A very creditable journal was published monthly by the Society. Besides the publications of Gall and Spurzheim, which were issued in French, large books were written on the subject by Dr. Vimont, Dr. Broussais, Dr. Fossati, and others.

In Scotland the best known representatives of the science were George Combe and his brother, Dr. Andrew Combe. The Edinburgh Phrenological Journal, which was published for many years by the Phrenological Society, contains some of the most valuable material that has been written on the subject. Besides the works of Gall, Spurzheim, and the Combe brothers, that were written in English or translated from the French, books were written by Sir George Mackenzie, Abernethy, Forster, De Ville, Alexander, Wildsmith, Holland, Epps, Greig, Thompson, Andrew Carmichael, Levison, Macnish, Cox, Browne, and others.

Although Phrenology met with the same opposition in England and Scotland as in other countries, and a vicious attack was made upon it by one of the writers in the Edinburgh Review, it made a deep impression upon the most progressive scientists and thinkers of those countries. It was introduced into the Anderson University, and became very popular with the students. W. R. Henderson bequeathed quite a large sum of money to disseminate its principles, and in his will said:

And, lastly, the whole residue of my means and estate shall, after answering the purposes above written, be applied by my said trustees in whatever manner they may judge best for the advancement and diffusion of the science of phrenology, and the practical application thereof in particular; giving hereby and committing to my said trustees, the most full and unlimited power to manage and dispose of the said residue,

in whatever manner shall appear to them best suited to promote the ends in view: Declaring, that if I had less confidence in my trustees, I would make it imperative on them to print and publish one or more editions of an "Essay on the Constitution of Man, Considered in Relation to External Objects, by George Combe,"—in a cheap form, so as to be easily purchased by the more intelligent individuals of the poorer classes, and Mechanics' Institutions, &c.; but that I consider it better only to request their particular attention to this suggestion, and to leave them quite at liberty to act as circumstances may seem to them to render expedient.

As an evidence that George Combe's works were not only of interest to the people of his own time it is interesting to note that as recently as 1892 Robert Cranston, Esq., formerly one of the magistrates of the city of Edinburgh, left in his trust disposition, "To the Society for the propagation of the works of George Combe, the sum of three hundred pounds." In 1893 the Combe trustees issued popular editions of "The Constitution of Man"; "Moral Philosophy"; "Science and Religion"; and "Discussions on Education," published by Cassell and Company, of London, Paris, Melbourne, and New York.

A valuable phrenological museum, with an extensive collection of casts and skulls, and a library which had been formed by the Society, was given over to the Henderson Trustees, on condition that facilities should be afforded to those who desired to study the science, and that the public should be admitted free on certain days of the week. Some of the most scholarly men in Scotland belonged to the Phrenological Society. The first Society was established on the 22d of February, 1820. It had 170 ordinary members, 19 of whom belonged to the medical profession. There was also a Junior Society, called the Edinburgh Ethical Society, for the Study and Practical Application of Phrenology. It was established in 1833, and continued the work of the Phrenological Society. The meetings were held once a week. Societies were organized in Glasgow, Belfast, and other cities of Scotland and Ireland.

The Phrenological Society of London was organized in 1824. It had 60 members. About one-fourth of them belonged to the medical profession. Dr. John Elliotson, one of the foremost physicians of England, was founder of the Society. There were several phrenological collections in London. The most extensive museum belonged to Mr. De Ville, and contained upwards of 1800 casts and skulls. Mr. De Ville was also said to have collected between three and four thousand

skulls of animals. Many courses of lectures on phrenology were given.

Phrenology was first introduced into America by Dr. Charles Caldwell, in 1818. He had been studying medicine in Paris, where he had an opportunity of receiving instruction in the true science of mind from Dr. Gall himself. Dr. Caldwell is author of several text-books on the subject, and did much to give the science popularity in America.

In 1832 Dr. Spurzheim came to America and conducted classes in Boston. He visited the schools in the neighborhood, studying the children and giving practical demonstrations in the observational method of character analysis. On invitation of President Josiah Quincy he was present at the exercises of Harvard University on Commencement Day, and attended those of the Phi Beta Kappa Society on the day following. His work created a great deal of interest and received support from many of the leading citizens of Boston. Dr. Spurzheim was in America only a short time before his strenuous life caused an illness which resulted in his death. President Quincy and the faculty of Harvard University were among his warmest friends. One of the faculty, Professor Follen, delivered an able and eloquent oration at the funeral of Dr. Spurzheim, and President Quincy presided over the Committee that arranged to take charge of his funeral obsequies, and to adopt measures proper to express the sense of the public loss sustained by the death of Dr. Spurzheim, and the respect entertained for him by the citizens.

Joseph Rodes Buchanan, M. D., who was prominently connected with several eclectic medical colleges during the last half of the nineteenth century, stands next to Dr. Gall as an original discoverer in phrenological science. He began his discoveries in 1841, and published a book on anthropology in 1854. He discovered psychometry, or soul measuring, and wrote quite a large book on the subject. Prof. William Denton, the geologist, published three volumes entitled, "The Soul of Things," based on the discovery of Dr. Buchanan. The most important discovery made by Dr. Buchanan is Therapeutic Sarcognomy, or the relation of the brain to the body, showing the sympathy which exists between each part of the surface of the brain and the corresponding part of the surface of the body. He wrote a book of nearly 700 pages entitled, "Therapeutic Sarcognomy," which should be studied by every person who desires to be familiar with the relation-

ships of mind, brain and body. From 1887 to 1890 Dr. Buchanan published "The Journal of Man" monthly, and therein gave his discoveries of the previous forty-five years to the world. His book, "The New Education," is one of the best guides in the development of human life and is based on phrenological principles.

The first Phrenological Society in America was organized in Boston and was granted an Act of Incorporation by the Legislature of Massachusetts, signed by the Governor in March, 1833. The first officers of the Society were as follows: Rev. John Pierpont, President; Dr. Jonothan Barber, Vice-President; Dr. Samuel G. Howe, Cor. Secretary; Nahum Capen, Rec. Secretary; E. P. Clark, Treasurer; Dr. J. F. Flagg, Dr. Winslow Lewis, Jr., Dr. Jos. W. McKean, and Wm. B. Fowle, Counsellors; Dr. N. B. Shurtleff and Henry T. Tuckerman, Curators

There were 144 members. Of these about one-fourth were physicians and the rest clergymen, merchants, lawyers, professors, teachers, artists, clerks and mechanics. Among the members were found some of the best known citizens of Boston, viz.: Rev. Henry Ware, Jr.; Rev. Dr. Brownson; Hon. John Pickering; Hon. Abbott Lawrence; Hon. J. W. Edmunds; Wm. P. Mason; Nathaniel C. Nash; Samuel Downer; Chas. G. Loring; J. H. Walcott; Moses Kimball; Geo. G. Smith; Jonas Chickering; Joseph Tilden; Otis Everett, Jr.; James Blake; Hon. James D. Greene; Hon. J. S. Sleeper; J. W. Ingraham; E. L. Frothingham; Wm. A. Alcott; Dr. Daniel Harwood; Wilder S. Thurston; Wm. Hunt; F. Skinner; John Appleton; Dr. Henry G. Clarke; John H. Blake; Daniel F. Child; Alvan Fisher; Daniel S. Smalley; Dr. M. S. Perry; Dr. John Flint; John J. Dixwell; etc. The following distinguished professors and authors were elected honorary members: Prof. Elliotson; Sir Geo. S. McKenzie; Sir Wm. Ellis; J. De Ville, of London; George Combe; Dr. Andrew Combe; Rev. Dr. Welsh, of Edinburgh; Prof. Otto, of Copenhagen; Prof. L. V. de Simoni, of Rio Janeiro; Dr. Richard Carmichael; Hon. Andrew Carmichael, of Dublin; Prof. Blumenbach, of Goettingen; Dr. J. Robertson; Prof. Andral; Dr. C. Broussais; Prof. Broussais; Dr. Felix Voisin; Dr. Vimont, of Paris; and Rev. Dr. Wheaton, Pres. Waslington College, Hartford, Conn. Quite a large number of scientific gentlemen, in the United States and abroad, were elected correspond-

ing members. In his advisory letter to Blumenbach, the Corresponding Secretary, Dr. Samuel G. Howe, says:

The Boston Phrenological Society has for its object the examination of the principles of the science of phrenology directly; and indirectly all of the physical that has a bearing upon the social, moral and intellectual conditions of man. It numbers among its members many of the scientific minds of our community.

In his letter to Sir George Stewart Mackenzie, after complimenting him upon his important labors in favor of phrenology, Dr. Howe says:

There is but little credit due to those who now embrace and defend a doctrine which has survived the storms of prejudice that assailed it at birth, and which numbers among its supporters some of the brightest geniuses of the age.

Space will not permit giving an account of all the other organizations established in the United States. One other organization that should receive mention here is the American Institute of Phrenology, which numbered among its members some of the leading characters of America, such as Horace Mann; Dr. Charles Caldwell; Rev. John Pierpont; and others. This Institute obtained an Act of Incorporation from the Legislature of the State of New York on the 20th of April, 1866, and afterwards an amendment in pursuance of an order of the Supreme Court, in September, 1875, thereby creating the American Institute of Phrenology, which reads as follows:

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Amos Dean, Esq.; Horace Greeley; Samuel Osgood, D. D.; A. Oakey Hall, Esq.; Russell T. Trall, M.D.; Henry Dexter; Samuel F. Wells; Edward P. Fowler, M. D.; Nelson Sizer; Lester A. Roberts; and their associates, are hereby constituted a body corporate, by the name of "The American Institute of Phrenology," for the purpose of promoting instruction in all departments of learning connected therewith, and for collecting and preserving crania, casts, busts, and other representations of the different races, tribes and families of men.

On the 14th of May, 1875, H. S. Drayton, A. M., M. D., was elected a member of the Board of Trustees, and was made secretary to fill the vacancy caused by the death of Samuel R. Wells, which occurred April 13, 1875. From the time the Institute was incorporated in 1866 annual courses of instruc-

tion in the principles and practice of phrenology have been given in New York. The large collection of skulls and casts of Fowler and Wells has been employed in the instruction of the classes to illustrate and exemplify the truths of phrenology. Men and women from all parts of the United States and Canada, and also from England, Scotland, France, Germany, Sweden and New Zealand, attended the classes.

It was soon after Spurzheim's visit to America that the students of Amherst College arranged for a debate on the subject, "Is Phrenology a Science?". Henry Ward Beecher was at that time a student at Amherst, and was chosen on the negative. He felt that campus jokes would not do for such an occasion, although it was thought that his ready wit would soon demolish phrenology. Beecher sent to Boston for the works of Spurzheim and Combe, and when reading them over found the subject such an important one that he had the debate postponed two weeks in order to give him more time to prepare for it. At the appointed time there was a splendid audience, composed of the faculty, students and citizens. Although Mr. Beecher had been chosen to represent the negative side he gave one of the strongest talks of his life on the affirmative, and years afterwards gave the following endorsement of the science, which appears on page 303 of Vol. 1 of his "Forty-eight Sermons":

All my life long I have been in the habit of using phrenology as that which solves the practical phenomena of life. Not that I regard the system as a complete one, but that I regard it as far more useful and far more practical and sensible than any other system of mental philosophy which has yet been evolved. The learned professions may do what they please, the common people will try these questions and will carry the day, to say nothing of the fact that all the great material and scientific classes, though they do not concede the truth of phrenology, are yet digesting it and making it an integral part of the scientific systems of mental philosophy.

On another occasion Mr. Beecher said:

If I were the owner of an island in mid-ocean, and had all books, apparatus and appliances, tools to cultivate the soil, manufacture, cook, and carry on life's affairs in comfort and refinement, and some dark night pirates should come and burn my books, musical instruments, works of art, furniture, tools and machinery, and leave me only the empty barns and house, I should be in respect to the successful carrying on of my affairs in very much the same plight that I should be as a preacher if phrenology and all that it has taught me of man, his character, his wants and his improvement were blotted from my mind.

Again Beecher wrote:

And I may say here, what I have never said before in the pulpit, that the views of the human mind as they are revealed by phrenology, are those views which have underlaid my whole ministry; and if I have had any success in the vigorous application of truths to the wants of the human soul, where they are most needed, I owe it to the clearness which I have gained from this science, and I could not ask for the members of my family, nor of a church, any better preparation for religious indoctrination than to put them into possession of such a practical knowledge of the human soul as is given by phrenology.

O. S. and L. N. Fowler were classmates of Henry Ward Beecher at Amherst College. When he had been converted to phrenology through the debate in which he took part he offered to lend them his books on the subject. They were so impressed by the science that they made a thorough study of it and did more to disseminate its principles than any other men of their time. In 1838 they began publishing the *Phrenological Journal*, which continued until the end of the first decade of the twentieth century. The Fowler and Wells Publishing Company issued a large number of other books on phrenology, physiognomy, and kindred subjects. This firm did more than anybody else in America to disseminate the principles of phrenology. Prof. Jessie A. Fowler, daughter of Mr. and Mrs. L. N. Fowler, is still continuing the annual sessions of the American Institute of Phrenology in New York, and M. H. Piercy is continuing the publishing business. In the history of this firm a number of the Fowler and Wells families contributed to its success. The most conspicuous were: O. S. Fowler; L. N. Fowler; Mrs. L. N. Fowler; S. R. Wells; and Charlotta Fowler Wells. Each of these wrote books on phrenology. Nelson Sizer, who for many years was consulting phrenologist for the Fowler and Wells Company, and had the reputation of being consulted by more than half a million people, is author of some of the best books on human nature. Among his chief works are: "Heads and Faces, and How to Study Them"; "How to Study Strangers"; "Choice of Pursuits," (which is the most complete work on the subject to date); "Forty Years in Phrenology." Other valuable works on character study that were published in America are: "The Temperaments," by D. H. Jaques, M. D.; "Brain and Mind," by Henry S. Drayton, A. M., M. D., and James McNeill; "Scientific Basis of Education, Demonstrated by an Analysis of Temperaments, and of Phrenologi-

cal Facts," by John Hecker, formerly Assistant Superintendent of Schools in New York; "Lectures on Phrenology," by Amos Dean; "The Science of Mind, Applied to Teaching," by U. J. Hoffman. Some of these are now out of print, but deserve to be revised and kept in circulation.

J. Stanley Grimes, Counselor at Law, is author of a number of books on phrenology and kindred studies. He devoted a long and active life to disseminating the principles of phrenology and perfected some phases of the science.

Prof. N. N. Riddell, the well known lecturer and author, wrote two excellent books based upon phrenological principles, "Human Nature Explained," and "The Psychology of Success," and for years gave lectures and consultations in which he used the principles of phrenology. The concluding chapter in his little work, "Child Culture," makes a strong plea for introducing phrenology and kindred subjects into the public schools.

Prof. L. A. Vaught of Chicago was one of the most original exponents of phrenological principles. For years he published a monthly journal entitled, "Human Faculty," and is author of a popular book, "Vaught's Practical Character Reader."

The late Prof. Allan Haddock, of San Francisco, did more than any other man in the west to extend a knowledge of phrenology through the monthly "Human Nature" that he published for years, and through his Human Nature Institute.

In the middle west Prof. M. Tope, of Bowerstown, Ohio, has devoted years to teaching phrenology through his "Phrenological Era," and his school.

For more than a half century Prof. George Morris, whose home is now at Portland, Oregon, has been one of the leading advocates of phrenology, and has done much to keep the principles upon a dignified scientific basis. His sister, Jean Morris Ellis, has disseminated the principles of phrenology through her work in character analysis and vocational guidance which she has done for a number of years under the auspices of the Young Men's Christian Associations. She is author of a book on character building and character study that is based upon phrenological principles.

J. M. Fitzgerald, M. D., of Chicago, was at one time President of the American Institute of Phrenology, and has been engaged in the professional work of analyzing character, and giving vocational advice according to the principles of phren-

ology. He is one of the leading advocates of the science in America today.

Among all the advocates of phrenology the man who has done most to popularize the principles in the business world is Prof. William Windsor, teacher of Dr. Katherine M. H. Blackford and other authors of popular systems of character analysis. Although Prof. Windsor has given his work to the world in recent years under the name of "Vitosophy," his early books were written in phrenological language, and in the introduction to his latest book, "The Problem of Human Life," he says:

The solution of the problem of human life is based upon the doctrine that by the adoption of a correct system of character study, human nature can be understood and estimated at its correct value.

The system of mental philosophy known as phrenology, inaugurated by Francis Joseph Gall, M. D., in Vienna, in 1786-7, elaborated by his pupil, John Gaspar Spurzheim, and later students, presents the foundation for such a system. It furnishes a more practical method for the study and determination of the elements of human character than any system of mental philosophy ever promulgated. The pure doctrine of phrenology, taught by Gall and Spurzheim, has suffered much at the hands of charlatans, quacks, and pseudo-scientists, so much as to be the subject of great ridicule by the misinformed. It has suffered hardly less at the hands of its ignorant and bigoted friends, who have sought to make the doctrine of the new science conform to existing standards of philosophy. Phrenology furnishes an admirable method of reading character, because it is based upon deductions drawn from external appearances.

During the past twenty-five years phrenology was at its lowest ebb. It is growing rapidly in popularity at the present time, and the utility of its principles will cause it to grow in favor with the public until it is given the place in popular education which it deserves. It has passed the experimental stage. Horace Mann and his associates demonstrated its great value in American education, and Queen Victoria's Inspector of Schools, who compiled George Combe's educational works, based upon phrenology, into a large volume of 842 pages, said in the introduction:

There is no doubt that to George Combe personally, the country is more indebted than to any other single individual for the development of National Education as now greatly accomplished, and for the prevalence of broader views regarding the function of Government in the education of the people.

During the past quarter century the principles of phrenology have been disseminated in western America through the Character Builder Magazine and the Human Culture School. The Editor of the Character Builder has given human nature talks in the schools of hundreds of cities and towns, and has spoken on personal efficiency and vocational guidance from the phrenological point of view in more than two hundred high schools, colleges and universities. Since May, 1918, The California-Brownsberger Commercial College of Los Angeles has had a department of practical psychology, conducted by the editor of the Character Builder, in which the work of character analysis and vocational guidance has been taught according to the principles of phrenology. The work has been popular with the students, who have come from various parts of the United States, and from as far as New Zealand. At the present time a number of students are taking extended courses, to qualify as vocational advisers, lecturers, employment managers and mental adjusters. The practical application of these principles in the business world has increased the demand for efficient workers, and the need for capable character analysts for the work of vocational guidance in the public schools is much greater than can be supplied by properly trained workers at the present time.

"Psychology for Teachers," by Daniel Wolford La Rue, Ph. D., published by the American Book Company and included in the "American Education Series," which is edited by George Drayton Strayer, gives more credit to phrenology than has any other school psychology. In the Preface the author says: "We appear to have applied psychology to the teaching of every subject except psychology itself. In this direction there is large room for development. Usually, all the student's work before beginning this subject has been objective. To plunge him headlong into subjective phenomena is too much like the method of teaching swimming by throwing the learner overboard." On page 262 Dr. La Rue says that a knowledge of temperament is helpful in quickly "sizing up" a pupil, and then remarks: "Psychology gives one classification of temperaments, phrenology another. Probably the phrenological method (substantially that which follows) offers a quicker key to human nature." He then devotes considerable space to teaching the temperaments phrenologically, and in a footnote says: "For a more extended account of temperament, phrenologically considered,

see Sizer and Drayton's 'Heads and Faces and How to Study Them.' Such books have excellent suggestive power, . . . the teacher can get much practical good from them."

If school psychology had offered Dr. La Rue anything equal to the phrenological system he certainly would have used it, but there is nothing in orthodox psychology that can take the place of the phrenological principles discovered by Dr. Gall and his scientific followers. Educators like Dr. Ruediger, Dean of the Teachers' College and Professor of Psychology in the George Washington University, after investigating phrenology recognize it as a scientific basis for applied psychology. Henry F. Lutz, A. B., Ph. D., is lecturing in eastern colleges and uses phrenology as the basis of his work. Professor Glenn Clark, a graduate of Harvard University, and now a member of the Faculty in Macalester College, has written a system of character analysis from the phrenological viewpoint. J. M. Fitzgerald, M. D., of Chicago, is devoting his life to disseminating phrenological principles. There may be many other professional people in America investigating and applying these fundamental principles. Psychologists who investigate phrenology may agree with Dr. Samuel G. Howe, founder of the Perkins Institute for the Blind, when he said: "Before I knew phrenology I was groping my way in the dark as blind as my pupils; I derived very little satisfaction from my labors, and fear that I gave but little to others." He then states that he taught the orthodox psychology of his time to his students and mystified them, but on presenting phrenology to them they said that they saw and felt and understood what before was dark and unsatisfactory. If the psychologists of today will follow the example of Dr. Howe they will equip their students for better service to humanity. In this book we have aimed to furnish a reliable guide to those who have the responsibility of teaching the science of mind, as well as to those who desire to acquire a knowledge of the true science of mind through home study.

In 1921 the author received credentials from the State Board of Education to teach vocational guidance in the secondary schools of California, thus getting recognition for the true science of mind explained in this book.

FACES

There are faces cold as the ice,
 And faces warm as the sun;
 There are faces all marred with vice
 And faces we ever shun;
 There are faces vacant of thought—
 Fair faces but nothing more;
 There are faces with sunlight caught,
 Sweet faces we half adore.

There are faces so hard we shrink
 To greet with a word or a kiss;
 There are faces from which we drink,
 And faces we ever miss;
 There are faces dark as a cloud
 Portending storm or rain,
 And faces that are gay and proud,
 Revealing a soul all vain.

There are faces kind with a love
 That reflects the love benign—
 The love that shines from heaven above
 And is of a friend the sign;
 There are faces that wear a frown,
 Driving the world away;
 And faces that tell of a crown
 As bright as a cloudless day.

There are cynical faces mean
 That sneer with never a word,
 And faces composed and serene
 By the power of truth once heard.
 There are beautiful faces oft,
 But not of powder or paint;
 And there are faces pure and soft,
 The faces quite of a saint.

God pity some faces I see!
 They speak of a life of shame;
 God pity some faces I see!
 They tell of no worthy aim.
 I read in the faces around
 Every thought that lies within,
 Virtues all fair, or hopes profound,
 Every vice or secret sin.

We chisel our thoughts in the face,
 Emotions paint unawares,
 With our minds and hearts ever trace
 Our joys and griefs and cares.
 It is love, it is hate, we write,
 Whatever we think or feel;
 It is doubt, it is faith, or light,
 Whatever is woe or weal.

Whatever we choose we may paint,
 The feelings refined or ill,
 The thought of the hero or saint,
 Whatever we love and will;
 A sculptor of self we may be,
 Chisel as Phidias wrought,
 Carve in the face what all may see—
 A soul by the master taught.

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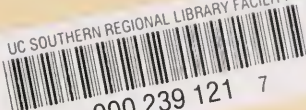
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